UGC NET 2022 COMPUTER SCIENCE N APPLICATIONS

Topic:- 87_PART_A_Set1

1) In a database, a rule is defined as (P1 and P2) or P3? R1 (0.8) and R2 (0.3), where P1, P2, P3 are premises and R1, R2 are conclusions of rules with certainty factors (CF) 0.8 and 0.3 respectively. If any running program has produced P1, P2, P3 with CF as 0.5, 0.8, 0.2 respectively, find the CF of results on the basis of premises.

[Question ID = 316][Question Description = 101_87_Computer_Science_OCT22_Q01]

1. CF (R1 = 0.8), CF (R2 = 0.3)

   [Option ID = 1261]
2. CF (R1 = 0.40), CF (R2 = 0.15)

   [Option ID = 1262]
3. CF (R1 = 0.15), CF (R2 = 0.35)

   [Option ID = 1263]
4. CF (R1 = 0.8), CF (R2 = 0.35)

   [Option ID = 1264]

2) There are three boxes. First box has 2 white, 3 black and 4 red balls. Second box has 3 white, 2 black and 2 red balls. Third box has 4 white, 1 black and 3 red balls. A box is chosen at random and 2 balls are drawn out of which 1 is white, and 1 is red. What is the probability that the balls came from first box?

[Question ID = 317][Question Description = 102_87_Computer_Science_OCT22_Q02]

1. 0.237

   [Option ID = 1265]
2. 0.723

   [Option ID = 1266]
3. 0.18

   [Option ID = 1267]
4. 0.452

   [Option ID = 1268]

3) Consider a memory system having address spaced at a distance of m, T = Bank cycle time and n number of banks, then the average data access time per word access in synchronous organization is

[Question ID = 318][Question Description = 103_87_Computer_Science_OCT22_Q03]

1. $t = \begin{cases} m.\dfrac{T}{n} & \text{for } m \ll n \\ T & \text{for } m \gg n \end{cases}$

   [Option ID = 1269]
2. $t = \begin{cases} T/n & \text{for } m \ll n \\ T & \text{for } m \gg n \end{cases}$

   [Option ID = 1270]
3. $t = \begin{cases} m.T & \text{for } m \ll n \\ T & \text{for } m \gg n \end{cases}$

[Option ID = 1271]

4. $t = \begin{cases} m.T & \text{for } m \ll n \\ m/T & \text{for } m \gg n \end{cases}$

[Option ID = 1272]

4) For multiprocessor system, interconnection network – cross bar switch is an example of

[Question ID = 319][Question Description = 104_87_Computer_Science_OCT22_Q04]

1. Non blocking network

   [Option ID = 1273]
2. Blocking network

   [Option ID = 1274]
3. That varies from connection to connection

   [Option ID = 1275]
4. Recurrent network

   [Option ID = 1276]

5) The representation of 4 bit code 1101 into 7 bit, even parity Hamming code is

[Question ID = 320][Question Description = 105_87_Computer_Science_OCT22_Q05]

1. (1010101)

   [Option ID = 1277]
2. (1111001)

   [Option ID = 1278]
3. (1011101)

   [Option ID = 1279]
4. (1110000)

   [Option ID = 1280]

6) The number of gate inputs, required to realize expression $ABC + A\overline{B}CD + E\overline{F} + AD$ is

[Question ID = 321][Question Description = 106_87_Computer_Science_OCT22_Q06]

1. 12

   [Option ID = 1281]
2. 13

   [Option ID = 1282]
3. 14

   [Option ID = 1283]
4. 15

   [Option ID = 1284]

7) Consider a logic gate circuit, with 8 input lines ($D_0, D_1, \ldots, D_7$) and 3 output lines (A_0, A_1, A_2) specified by following operations

$$A_2 = D_4 + D_5 + D_6 + D_7$$
$$A_1 = D_2 + D_3 + D_6 + D_7$$
$$A_0 = D_1 + D_3 + D_5 + D_0$$

Where + indicates logical OR operation. This circuit is

[Question ID = 322][Question Description = 107_87_Computer_Science_OCT22_Q07]

1. 3×8 multiplexer

   [Option ID = 1285]

2. Decimal to BCD converter

   [Option ID = 1286]

3. Octal to Binary encoder

   [Option ID = 1287]

4. Priority encoder

   [Option ID = 1288]

8) The total storage capacity of a floppy disk having 80 tracks and storing 128 bytes/sector is 163,840 bytes. How many sectors does this disk have?

[Question ID = 323][Question Description = 108_87_Computer_Science_OCT22_Q08]

1. 2^7

   [Option ID = 1289]

2. 2048

   [Option ID = 1290]

3. 4K

   [Option ID = 1291]

4. 16

   [Option ID = 1292]

9) In a cache memory, if address has 9 bits in Tag field and 12 bits in index field, the size of main memory and cache memory would be respectively

[Question ID = 324][Question Description = 109_87_Computer_Science_OCT22_Q09]

1. 2 K, 4 K

   [Option ID = 1293]

2. 1024 K, 2 K

   [Option ID = 1294]

3. 4 K, 2048 K

   [Option ID = 1295]

4. 2048 K, 4 K

   [Option ID = 1296]

10) Consider the primal problem :

Maximize $z = 5x_1 + 12x_2 + 4x_3$

Subject to $x_1 + 2x_2 + x_3 = 10$

$$2x_1 - x_2 + 3x_3 = 8$$

$$x_1, x_2, x_3 \geq 0$$

its dual problem is

Minimize $w = 10y_1 + 8y_2$

Subject to $y_1 + 2y_2 \geq 5$

$$2y_1 - y_2 \geq 12$$

$$y_1 + 3y_2 \geq 4$$

Which of the following is correct?

[Question ID = 325][Question Description = 110_87_Computer_Science_OCT22_Q10]

1. $y_1 \geq 0$, y_2 unrestricted

   [Option ID = 1297]

2. $y_1 \geq 0$, $y_2 \geq 0$

   [Option ID = 1298]

3. y_1 is unrestricted, $y_2 \geq 0$

   [Option ID = 1299]

4. y_1 is unrestricted, y_2 restricted

   [Option ID = 1300]

11) The logic expression $(\overline{P} \wedge Q) \vee (P \wedge \overline{Q}) \vee (P \wedge Q)$ is equivalent to

[Question ID = 326][Question Description = 111_87_Computer_Science_OCT22_Q11]

1. $\overline{P} \vee Q$

   [Option ID = 1301]

2. $P \vee \overline{Q}$

   [Option ID = 1302]

3. $P \vee Q$

   [Option ID = 1303]

4. $\overline{P} \vee \overline{Q}$

   [Option ID = 1304]

12) The reduced grammar equivalent to the grammar, whose production rules are given below, is

$S \rightarrow AB \mid CA$

$B \rightarrow BC \mid AB$

$A \rightarrow a$

$C \rightarrow aB \mid b$

[Question ID = 327][Question Description = 112_87_Computer_Science_OCT22_Q12]

1. $S \rightarrow CA, A \rightarrow a, C \rightarrow b$

   [Option ID = 1305]

2. $S \rightarrow CA \mid B, B \rightarrow BC \mid B, A \rightarrow a, C \rightarrow aB \mid b$

[Option ID = 1306]

3. $S \rightarrow CA \mid B, B \rightarrow BC, A \rightarrow a, C \rightarrow aB \mid b$

[Option ID = 1307]

4. $S \rightarrow AB \mid AC, B \rightarrow BC \mid BA, A \rightarrow a, C \rightarrow aB \mid b$

[Option ID = 1308]

13) Consider the production rules of grammer G:

$S \rightarrow AbB$

$A \rightarrow aAb \mid \lambda$

$B \rightarrow bB \mid \lambda$

Which of the following language L is generated by grammer G?

[Question ID = 328][Question Description = 113_87_Computer_Science_OCT22_Q13]

1. $L = \{a^n b^m : n \geq 0, m > n\}$

[Option ID = 1309]

2. $L = \{a^n b^m : n \geq 0, m \geq 0\}$

[Option ID = 1310]

3. $L = \{a^n b^m : n \geq m\}$

[Option ID = 1311]

4. $L = \{a^n b^m : n \geq m, m > 0\}$

[Option ID = 1312]

14) Consider the language $L = \{a^n b^m : n \geq 4, m \leq 3\}$

Which of the following regular expression represents language L?

[Question ID = 329][Question Description = 114_87_Computer_Science_OCT22_Q14]

1. $aaaa^*(\lambda + b + bb + bbb)$

[Option ID = 1313]

2. $aaaaa^*(b + bb + bbb)$

[Option ID = 1314]

3. $aaaaa^*(\lambda + b + bb + bbb)$

[Option ID = 1315]

4. $aaaa^*(b + bb + bbb)$

[Option ID = 1316]

15) Consider $L = \{ab, aa, baa\}$

Which of the following string is NOT in L*?

[Question ID = 330][Question Description = 115_87_Computer_Science_OCT22_Q15]

1. baaaaabaaaaa

[Option ID = 1317]

2. abaabaaabaa

[Option ID = 1318]

3. aaaabaaaa

[Option ID = 1319]

4. baaaaabaa

[Option ID = 1320]

16) Consider the following NPDA $= \left(\{q_0, q_1, q_f\}, \{a, b\}, \{1, z\}, \delta, q_0, z, \{q_f\} \right)$

$$\delta(q_0, \lambda, z) = \{(q_f, z)\}$$

$$\delta(q_0, a, z) = \{(q_1, 11z)\}$$

$$\delta(q_1, a, 1) = \{(q_1, 111)\}$$

$$\delta(q_1, b, 1) = \{(q_1, \lambda)\}$$

$$\delta(q_1, \lambda, z) = \{(q_f, z)\}$$

Which of the following Language L is accepted by NPDA?

[Question ID = 331][Question Description = 116_87_Computer_Science_OCT22_Q16]

1. $L = \{a^{2n}b^n : n \geq 0\}$

[Option ID = 1321]

2. $L = \{a^n b^{2n} : n \geq 0\}$

[Option ID = 1322]

3. $L = \{a^{2n}b^n : n > 0\}$

[Option ID = 1323]

4. $L = \{a^n b^{2n} : n > 0\}$

[Option ID = 1324]

17) Hidden surface removal problem with minimal 3D pipeline can be solved with

[Question ID = 332][Question Description = 117_87_Computer_Science_OCT22_Q17]

1. Painter's algorithm

[Option ID = 1325]

2. Window Clipping algorithm

[Option ID = 1326]

3. Brute force rasterization algorithm

[Option ID = 1327]

4. Flood fill algorithm

[Option ID = 1328]

18) Using 'RSA' algorithm, if p = 13, q = 5 and e = 7, the value of d and cipher value of '6' with (e, n) key are

[Question ID = 333][Question Description = 118_87_Computer_Science_OCT22_Q18]

1. 7, 4

[Option ID = 1329]

2. 7, 1

[Option ID = 1330]

3. 7.46

[Option ID = 1331]

4. 55, 1

[Option ID = 1332]

19) The condition num! = 65 cannot be replaced by

[Question ID = 334][Question Description = 119_87_Computer_Science_OCT22_Q19]

1. num > 65 || num < 65

[Option ID = 1333]

2. ! (num == 65)

[Option ID = 1334]

3. num − 65

[Option ID = 1335]

4. ! (num − 65)

[Option ID = 1336]

20) Pointers cannot be used to

[Question ID = 335][Question Description = 120_87_Computer_Science_OCT22_Q20]

1. find the address of a variable in memory

[Option ID = 1337]

2. reference value directly

[Option ID = 1338]

3. simulate call by reference

[Option ID = 1339]

4. manipulate dynamic data structure

[Option ID = 1340]

21) Which mechanism in XML allows organizations to specify globally unique names as element tags in documents?

[Question ID = 336][Question Description = 121_87_Computer_Science_OCT22_Q21]

1. root

[Option ID = 1341]

2. header

[Option ID = 1342]

3. schema

[Option ID = 1343]

4. namespace

[Option ID = 1344]

22) If an operating system does not allow a child process to exist when the parent process has been terminated, this phenomenon is called as -

[Question ID = 337][Question Description = 122_87_Computer_Science_OCT22_Q22]

1. Threading

[Option ID = 1345]

2. Cascading termination

[Option ID = 1346]

3. Zombie termination

[Option ID = 1347]

4. Process killing

[Option ID = 1348]

23) What is called Journalling in Linux operating system?

[Question ID = 338][Question Description = 123_87_Computer_Science_OCT22_Q23]

1. Process scheduling

[Option ID = 1349]

2. File saving as transaction

[Option ID = 1350]

3. A type of thread

[Option ID = 1351]

4. An editor

[Option ID = 1352]

24) This transformation is called

$$\begin{bmatrix} \overline{x} \\ \overline{y} \\ \overline{z} \\ \overline{w} \end{bmatrix} = \begin{bmatrix} a_1 & b_1 & c_1 & d_1 \\ a_2 & b_2 & c_2 & d_2 \\ a_3 & b_3 & c_3 & d_3 \\ e & f & g & h \end{bmatrix} - \begin{bmatrix} x \\ y \\ z \\ 1 \end{bmatrix}$$

[Question ID = 339][Question Description = 124_87_Computer_Science_OCT22_Q24]

1. Scaling

[Option ID = 1353]

2. Shear

[Option ID = 1354]

3. Homography

[Option ID = 1355]

4. Steganography

[Option ID = 1356]

25) RAD software process model stands for

[Question ID = 340][Question Description = 125_87_Computer_Science_OCT22_Q25]

1. Rapid Application Development

[Option ID = 1357]

2. Relative Application Development

[Option ID = 1358]

3. Rapid Application Design

[Option ID = 1359]

4. Recent Application Development

[Option ID = 1360]

26) If every requirement can be checked by a cost – effective process, then SRS is called

[Question ID = 341][Question Description = 126_87_Computer_Science_OCT22_Q26]

1. Verifiable

   [Option ID = 1361]
2. Tracable

   [Option ID = 1362]
3. Modifiable

   [Option ID = 1363]
4. Complete

   [Option ID = 1364]

27) Fault base testing technique is

[Question ID = 342][Question Description = 127_87_Computer_Science_OCT22_Q27]

1. Unit testing

   [Option ID = 1365]
2. Beta testing

   [Option ID = 1366]
3. Stress testing

   [Option ID = 1367]
4. Mutation testing

   [Option ID = 1368]

28) Alpha and Beta testing are forms of

[Question ID = 343][Question Description = 128_87_Computer_Science_OCT22_Q28]

1. White – Box Testing

   [Option ID = 1369]
2. Black – Box Testing

   [Option ID = 1370]
3. Acceptance Testing

   [Option ID = 1371]
4. System Testing

   [Option ID = 1372]

29) The process to gather the software requirements from client, analyze and document is known as -

[Question ID = 344][Question Description = 129_87_Computer_Science_OCT22_Q29]

1. Software Engineering Process

   [Option ID = 1373]
2. User Engineering Process

   [Option ID = 1374]
3. Requirement Elicitation Process

   [Option ID = 1375]
4. Requirement Engineering Process

[Option ID = 1376]

30) Size and complexity are a part of

[Question ID = 345][Question Description = 130_87_Computer_Science_OCT22_Q30]

1. People Metrics

   [Option ID = 1377]

2. Project Metrics

   [Option ID = 1378]

3. Process Metrics

   [Option ID = 1379]

4. Product Metrics

   [Option ID = 1380]

31) Which Metrics are derived by normalizing quality and/or productivity measures by considering the size of the software that has been produced?

[Question ID = 346][Question Description = 131_87_Computer_Science_OCT22_Q31]

1. Function – Oriented Metrics

   [Option ID = 1381]

2. Function – Point Metrics

   [Option ID = 1382]

3. Line of Code Metrics

   [Option ID = 1383]

4. Size Oriented Metrics

   [Option ID = 1384]

32) The model in which the requirements are implemented by its category is

[Question ID = 347][Question Description = 132_87_Computer_Science_OCT22_Q32]

1. Evolutionary Development Model

   [Option ID = 1385]

2. Waterfall Model

   [Option ID = 1386]

3. Prototyping Model

   [Option ID = 1387]

4. Iterative Enhancement Model

   [Option ID = 1388]

33) Which of the following is an indirect measure of product?

[Question ID = 348][Question Description = 133_87_Computer_Science_OCT22_Q33]

1. Quality

   [Option ID = 1389]

2. Complexity

   [Option ID = 1390]

3. Reliability

[Option ID = 1391]

4. All of these

[Option ID = 1392]

34) Modules X and Y operate on the same input and output, then the cohesion is

[Question ID = 349][Question Description = 134_87_Computer_Science_OCT22_Q34]

1. Logical cohesion

[Option ID = 1393]

2. Sequential cohesion

[Option ID = 1394]

3. Procedural cohesion

[Option ID = 1395]

4. Communicational cohesion

[Option ID = 1396]

35) Which mode is a block cipher implementation as a self synchronizing stream cipher?

[Question ID = 350][Question Description = 135_87_Computer_Science_OCT22_Q35]

1. Cipher Block Chaining Mode

[Option ID = 1397]

2. Cipher Feedback Mode

[Option ID = 1398]

3. Electronic Codebook Mode

[Option ID = 1399]

4. Output Feedback Mode

[Option ID = 1400]

36) Which one is a connectionless transport – layer protocol that belongs to the Internet protocol family?

[Question ID = 351][Question Description = 136_87_Computer_Science_OCT22_Q36]

1. Transmission Control Protocol (TCP)

[Option ID = 1401]

2. User Datagram Protocol (UDP)

[Option ID = 1402]

3. Routing Protocol (RP)

[Option ID = 1403]

4. Datagram Control Protocol (DCP)

[Option ID = 1404]

37) Consider an error free 64 kbps satellite channel used to send 512 byte data frames in one direction with very short acknowledgements coming back the other way. What is the maximum throughput for window size of 15?

[Question ID = 352][Question Description = 137_87_Computer_Science_OCT22_Q37]

1. 32 kbps

[Option ID = 1405]

2. 48 kbps

[Option ID = 1406]

3. 64 kbps

[Option ID = 1407]

4. 70 kbps

[Option ID = 1408]

38) A classless address is given as 167.199.170.82/27. The number of addresses in the network is

[Question ID = 353][Question Description = 138_87_Computer_Science_OCT22_Q38]

1. 64 addresses

[Option ID = 1409]

2. 32 addresses

[Option ID = 1410]

3. 28 addresses

[Option ID = 1411]

4. 30 addresses

[Option ID = 1412]

39) Which layer divides each message into packets at the source and re-assembles them at the destination?

[Question ID = 354][Question Description = 139_87_Computer_Science_OCT22_Q39]

1. Network layer

[Option ID = 1413]

2. Transport layer

[Option ID = 1414]

3. Data link layer

[Option ID = 1415]

4. Physical layer

[Option ID = 1416]

40) A 4-stage pipeline has the stage delay as 150,120,160 and 140 ns respectively. Registers that are used between the stages have delay of 5 ns. Assuming constant locking rate, the total time required to process 1000 data items on this pipeline is

[Question ID = 355][Question Description = 140_87_Computer_Science_OCT22_Q40]

1. 160.5 ms

[Option ID = 1417]

2. 165.5 ms

[Option ID = 1418]

3. 120.5 ms

[Option ID = 1419]

4. 590.5 ms

[Option ID = 1420]

41) Which of the following is correct for the destination address 4A : 30 : 10 : 21 : 10 : 1A?

[Question ID = 356][Question Description = 141_87_Computer_Science_OCT22_Q41]

1. unicast address

   [Option ID = 1421]

2. multicast address

   [Option ID = 1422]

3. broadcast address

   [Option ID = 1423]

4. unicast and broadcast address

   [Option ID = 1424]

42) Assume that $f(n)$ and $g(n)$ are asymptotically positive. Which of the following is correct?

[Question ID = 357][Question Description = 142_87_Computer_Science_OCT22_Q42]

1. $f(n) = O(g(n))$ and $g(n) = O(h(n)) \Rightarrow f(n) = \omega(h(n))$

   [Option ID = 1425]

2. $f(n) = \Omega(g(n))$ and $g(n) = \Omega(h(n)) \Rightarrow f(n) = O(h(n))$

   [Option ID = 1426]

3. $f(n) = o(g(n))$ and $g(n) = o(h(n)) \Rightarrow f(n) = o(h(n))$

   [Option ID = 1427]

4. $f(n) = \omega(g(n))$ and $g(n) = \omega(h(n)) \Rightarrow f(n) = \Omega(h(n))$

   [Option ID = 1428]

43) The solution of the recurrence relation $T(n) = 3T\left(\dfrac{n}{4}\right) + n\lg n$ is

[Question ID = 358][Question Description = 143_87_Computer_Science_OCT22_Q43]

1. $\theta(n^2 \lg n)$

   [Option ID = 1429]

2. $\theta(n \lg n)$

   [Option ID = 1430]

3. $\theta(n \lg n)^2$

   [Option ID = 1431]

4. $\theta(n \lg \lg n)$

   [Option ID = 1432]

44) The number of nodes of height h in any n-element heap is atmost:

[Question ID = 359][Question Description = 144_87_Computer_Science_OCT22_Q44]

1. $\dfrac{n}{2^{h+1}}$

   [Option ID = 1433]

2. $\dfrac{n}{2^{h-1}}$

   [Option ID = 1434]

3. $\dfrac{n}{2^h}$

[Option ID = 1435]

4. $\dfrac{n-1}{2^{h-1}}$

[Option ID = 1436]

45) Consider a B-tree of height h, minimum degree $t \geq 2$ that contains any n-key, where $n \geq 1$. Which of the following is correct?

[Question ID = 360][Question Description = 145_87_Computer_Science_OCT22_Q45]

1. $h \geq \log_t \dfrac{n+1}{2}$

[Option ID = 1437]

2. $h \leq \log_t \dfrac{n+1}{2}$

[Option ID = 1438]

3. $h \geq \log_t \dfrac{n-1}{2}$

[Option ID = 1439]

4. $h \leq \log_t \dfrac{n-1}{2}$

[Option ID = 1440]

46) Which of the following algorithm design approach is used in Quick sort algorithm?

[Question ID = 361][Question Description = 146_87_Computer_Science_OCT22_Q46]

1. Dynamic programming

[Option ID = 1441]

2. Back Tracking

[Option ID = 1442]

3. Divide and conquer

[Option ID = 1443]

4. Greedy approach

[Option ID = 1444]

47) Consider the hash table of size 11 that uses open addressing with linear probing. Let $h(k) = k\ mod\ 11$ be the hash function. A sequence of records with keys 43, 36, 92, 87, 11, 47, 11, 13, 14 is inserted into an initially empty hash table, the bins of which are indexed from 0 to 10. What is the index of the bin into which the last record is inserted?

[Question ID = 362][Question Description = 147_87_Computer_Science_OCT22_Q47]

1. 8

[Option ID = 1445]

2. 7

[Option ID = 1446]

3. 10

[Option ID = 1447]

4. 4

[Option ID = 1448]

48) Consider the traversal of a tree

Preorder → ABCEIFJDGHKL

Inorder → EICFJBGDKHLA

Which of the following is correct post order traversal?

[Question ID = 363][Question Description = 148_87_Computer_Science_OCT22_Q48]

1. EIFJCKGLHDBA

   [Option ID = 1449]

2. FCGKLHDBUAE

   [Option ID = 1450]

3. FCGKLHDBAEIJ

   [Option ID = 1451]

4. IEJFCGKLHDBA

   [Option ID = 1452]

49) How many rotations are required during the construction of an AVL tree if the following elements are to be added in the given sequence?

35, 50, 40, 25, 30, 60, 78, 20, 28

[Question ID = 364][Question Description = 149_87_Computer_Science_OCT22_Q49]

1. 2 left rotations, 2 right rotations

   [Option ID = 1453]

2. 2 left rotations, 3 right rotations

   [Option ID = 1454]

3. 3 left rotations, 2 right rotations

   [Option ID = 1455]

4. 3 left rotations, 1 right rotation

   [Option ID = 1456]

50) Consider the following two lists :

	List I		List II
(A)	Stack overflow	(I)	Software interrupt
(B)	Timer	(II)	Internal interrupt
(C)	Invalid opcode	(III)	External interrupt
(D)	Superior call	(IV)	Machine check interrupt

Which of the following is correct match ?

[Question ID = 365][Question Description = 150_87_Computer_Science_OCT22_Q50]

1. (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

   [Option ID = 1457]

2. (A)-(II), (B)-(III), (C)-(I), (D)-(IV)

   [Option ID = 1458]

3. (A)-(I), (B)-(II), (C)-(IV), (D)-(III)

   [Option ID = 1459]

4. (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

[Option ID = 1460]

51) Let R (ABCDEFGH) be a relation schema and F be the set of dependencies $F = \{A \rightarrow B, ABCD \rightarrow E, EF \rightarrow G, EF \rightarrow H \text{ and } ACDF \rightarrow EG\}$. The minimal cover of a set of functional dependencies is

[Question ID = 366][Question Description = 151_87_Computer_Science_OCT22_Q51]

1. $A \rightarrow B, ACD \rightarrow E, EF \rightarrow G$, and $EF \rightarrow H$

   [Option ID = 1461]
2. $A \rightarrow B, ACD \rightarrow E, EF \rightarrow G, EF \rightarrow H$ and $ACDF \rightarrow G$

   [Option ID = 1462]
3. $A \rightarrow B, ACD \rightarrow E, EF \rightarrow G, EF \rightarrow H$ and $ACDF \rightarrow E$

   [Option ID = 1463]
4. $A \rightarrow B, ABCD \rightarrow E, EF \rightarrow H$ and $EF \rightarrow G$

   [Option ID = 1464]

52) A trigger is

[Question ID = 367][Question Description = 152_87_Computer_Science_OCT22_Q52]

1. A statement that enables to start DBMS.

   [Option ID = 1465]
2. A statement that is executed by the user when debugging an application program.

   [Option ID = 1466]
3. A condition the system tests for the validity of the database user.

   [Option ID = 1467]
4. A statement that is executed automatically by the system as a side effect of modification to the database.

   [Option ID = 1468]

53) For the following page reference string 4, 3, 2, 1, 4, 3, 5, 4, 3, 2, 1, 5, the number of page faults that occur in Least Recently Used (LRU) page replacement algorithm with frame size 3 is

[Question ID = 368][Question Description = 153_87_Computer_Science_OCT22_Q53]

1. 6

   [Option ID = 1469]
2. 8

   [Option ID = 1470]
3. 10

   [Option ID = 1471]
4. 12

   [Option ID = 1472]

54) A magnetic tape drive has transport speed of 200 inches per second and a recording density of 1600 bytes per inch. The time required to write 600000 bytes of data grouped in 100 characters record with a blocking factor 10 is

[Question ID = 369][Question Description = 154_87_Computer_Science_OCT22_Q54]

1. 2.0625 sec

[Option ID = 1473]

2. 2.6251 sec

[Option ID = 1474]

3. 2.0062 sec

[Option ID = 1475]

4. 2.6150 sec

[Option ID = 1476]

55) Consider two lists A and B of three strings on {0, 1}

X :

List A	List B
1	111
10111	10
10	0

Y :

List A	List B
10	101
011	11
101	011

Which of the following is true?

[Question ID = 370][Question Description = 155_87_Computer_Science_OCT22_Q55]

1. Only PCP in X has solution.

[Option ID = 1477]

2. Only PCP in Y has solution.

[Option ID = 1478]

3. PCP in both X and Y has solution.

[Option ID = 1479]

4. PCP neither in X nor in Y has solution.

[Option ID = 1480]

56) Consider the properties of recursively enumerable sets :

(A)   Finiteness

(B)   Context Freedom

(C)   Emptiness

Which of the following is true?

[Question ID = 371][Question Description = 156_87_Computer_Science_OCT22_Q56]

1. Only (A) and (B) are not decidable

[Option ID = 1481]

2. Only (B) and (C) are not decidable

[Option ID = 1482]

3. Only (C) and (A) are not decidable

[Option ID = 1483]

4. All (A), (B) and (C) are not decidable

[Option ID = 1484]

57) Consider the following :

	List I		List II
(A)	Activation record	(I)	Linking Loader
(B)	Location counter	(II)	Garbage Collection
(C)	Reference count	(III)	Subroutine Call
(D)	Address relocation	(IV)	Assembler

Which of the following is correct matching ?

[Question ID = 372][Question Description = 157_87_Computer_Science_OCT22_Q57]

1. (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

   [Option ID = 1485]

2. (A)-(IV), (B)-(III), (C)-(I), (D)-(II)

   [Option ID = 1486]

3. (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

   [Option ID = 1487]

4. (A)-(II), (B)-(III), (C)-(I), (D)-(IV)

   [Option ID = 1488]

58) Consider the following related to Fourth Generation Technique (4GT) :

(A) It controls efforts.

(B) It controls resources.

(C) It controls cost of development.

Choose the correct answer from the options given below :

[Question ID = 373][Question Description = 158_87_Computer_Science_OCT22_Q58]

1. (A) and (B) only

   [Option ID = 1489]

2. (B) and (C) only

   [Option ID = 1490]

3. (C) and (A) only

   [Option ID = 1491]

4. All (A), (B) and (C)

   [Option ID = 1492]

59) Consider the grammer S → SbS | a .

   Consider the following statements :

   The string ababa has

(A) two parse trees

(B) two left most derivations

(C) two right most derivations

Which of the following is correct?

[Question ID = 374][Question Description = 159_87_Computer_Science_OCT22_Q59]

1. All (A), (B) and (C) are true

2. Only (B) is true

[Option ID = 1494]

3. Only (C) is true

[Option ID = 1495]

4. Only (A) is true

[Option ID = 1496]

60) In a game playing search tree, upto which depth $\alpha - \beta$ pruning can be applied?

(A) Root (0) level

(B) 6 level

(C) 8 level

(D) Depends on utility value in a breadth first order

Choose the correct answer from the options given below :

[Question ID = 375][Question Description = 160_87_Computer_Science_OCT22_Q60]

1. (B) and (C) only

[Option ID = 1497]

2. (A) and (B) only

[Option ID = 1498]

3. (A), (B) and (C) only

[Option ID = 1499]

4. (A) and (D) only

[Option ID = 1500]

61) Consider α, β, γ as logical variables. Identify which of the following represents correct logical equivalence :

(A) $(\alpha \wedge (\beta \vee \gamma)) \equiv ((\alpha \wedge \beta) \vee (\alpha \wedge \gamma))$

(B) $(\alpha \vee \beta) \equiv \neg \alpha \vee \beta$

(C) $(\alpha \Rightarrow \beta) \equiv (\neg \beta \Rightarrow \neg \alpha)$

(D) $(\neg(\alpha \vee \beta)) \equiv (\neg \alpha \Rightarrow \neg \beta)$

Choose the correct answer from the options given below :

[Question ID = 376][Question Description = 161_87_Computer_Science_OCT22_Q61]

1. (A) and (D) only

[Option ID = 1501]

2. (B) and (C) only

[Option ID = 1502]

3. (A) and (C) only

[Option ID = 1503]

4. (B) and (D) only

[Option ID = 1504]

62) Let $(\{a, b\}, *)$ be a semigroup, where $a * a = b$.

(A) $a * b = b * a$

(B) $b * b = b$

Choose the most appropriate answer from the options given below :

[Question ID = 377][Question Description = 162_87_Computer_Science_OCT22_Q62]

1. (A) only true

[Option ID = 1505]

2. (B) only true

[Option ID = 1506]

3. Both (A) and (B) true

[Option ID = 1507]

4. Neither (A) nor (B) true

[Option ID = 1508]

63) Consider the following graph :
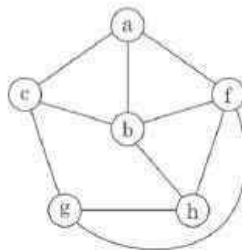
For the graph; the following sequences of depth first search (DFS) are given

(A) abcghf

(B) abfchg

(C) abfhgc

(D) afghbc

Which of the following is correct?

[Question ID = 378][Question Description = 163_87_Computer_Science_OCT22_Q63]

1. (A), (B) and (D) only

[Option ID = 1509]

2. (A), (B), (C) and (D)

[Option ID = 1510]

3. (B), (C) and (D) only

[Option ID = 1511]

4. (A), (C) and (D) only

[Option ID = 1512]

64) Let $\epsilon = 0.0005$, and Let R_ϵ be the relation $\{(x, y) \in R^2 : |x - y| < \epsilon\}$. R_ϵ could be interpreted as the relation <u>approximately equal</u>. R_ϵ is

(A) Reflexive

(B) Symmetric

(C) transitive

Choose the correct answer from the options given below :

1. (A) and (B) only true

   [Option ID = 1513]
2. (B) and (C) only true

   [Option ID = 1514]
3. (A) and (C) only true

   [Option ID = 1515]
4. (A), (B) and (C) true

   [Option ID = 1516]

65) In reference to Big data, consider the following database :

(A) Memcached

(B) Couch DB

(C) Infinite graph

Choose the most appropriate answer from the options given below :

1. (A) and (B) only

   [Option ID = 1517]
2. (B) and (C) only

   [Option ID = 1518]
3. (C) and (A) only

   [Option ID = 1519]
4. (A), (B) and (C)

   [Option ID = 1520]

66) Match List I with List II :

List I		List II	
(A)	BCNF	(I)	It removes multivalued dependency
(B)	3NF	(II)	It is not always dependency preserving
(C)	2 NF	(III)	It removes transitive dependency
(D)	4 NF	(IV)	It removes partial functional dependency

Choose the correct answer from the options given below:

1. (A)-(III), (B)-(II), (C)-(IV), (D)-(I)

   [Option ID = 1521]

2.   (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

[Option ID = 1522]

3.   (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

[Option ID = 1523]

4.   (A)-(II), (B)-(I), (C)-(IV), (D)-(III)

[Option ID = 1524]

67)   Match List I with List II :

	List I		List II
(A)	Localization	(I)	Encapsulation
(B)	Packaging or binding of a collection of items	(II)	Abstraction
(C)	Mechanism that enables designer to focus on essential details of a program component.	(III)	Characteristic of software that indicates the manner in which information is concentrated in program
(D)	Information hiding	(IV)	Suppressing the operational details of a program component

Choose the correct answer from the options given below :

[Question ID = 382][Question Description = 167_87_Computer_Science_OCT22_Q67]

1.   (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

[Option ID = 1525]

2.   (A)-(II), (B)-(I), (C)-(III), (D)-(IV)

[Option ID = 1526]

3.   (A)-(III), (B)-(I), (C)-(II), (D)-(IV)

[Option ID = 1527]

4.   (A)-(III), (B)-(I), (C)-(IV), (D)-(II)

[Option ID = 1528]

68)   Match List I with List II :

	List I		List II
(A)	Type 0	(I)	Finite automata
(B)	Type 1	(II)	Tuning machine
(C)	Type 2	(III)	Linear bound automata
(D)	Type 3	(IV)	Pushdown automata

Choose the correct answer from the options given below :

[Question ID = 383][Question Description = 168_87_Computer_Science_OCT22_Q68]

1.   (A)-(III), (B)-(IV), (C)-(II), (D)-(I)

[Option ID = 1529]

2.   (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

[Option ID = 1530]

3.   (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

[Option ID = 1531]

4.   (A)-(II), (B)-(III), (C)-(II), (D)-(IV)

[Option ID = 1532]

69) Match List I with List II :

List I

(A) Ontological Engineering
(B) Taxonomy Hierarchy
(C) Inheritance
(D) Probability mode

List II

(I) Organizing subclass relations
(II) Organizing knowledge into category and sub category
(III) Attaches a number with each possibility
(IV) Representing concepts, events, time, physical concepts of different domains

Choose the correct answer from the options given below :

[Question ID = 384][Question Description = 169_87_Computer_Science_OCT22_Q69]

1. (A)-(II), (B)-(I), (C)-(IV), (D)-(III)

   [Option ID = 1533]
2. (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

   [Option ID = 1534]
3. (A)-(IV), (B)-(III), (C)-(I), (D)-(II)

   [Option ID = 1535]
4. (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

   [Option ID = 1536]

70) Match List I with List II :

List I

(A) Least frequently used
(B) Critical Section
(C) Loosely coupled multiprocessor system
(D) Distributed operating system organization

List II

(I) Memory is distributed among processors
(II) Page replacement policy in cache memory
(III) Program section that once begin must complete execution before another processor access the same shared resource
(IV) O/S routines are distributed among available processors.

Choose the correct answer from the options given below :

[Question ID = 385][Question Description = 170_87_Computer_Science_OCT22_Q70]

1. (A)-(III), (B)-(II), (C)-(IV), (D)-(I)

   [Option ID = 1537]
2. (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

   [Option ID = 1538]
3. (A)-(II), (B)-(III), (C)-(I), (D)-(IV)

   [Option ID = 1539]
4. (A)-(II), (B)-(I), (C)-(III), (D)-(IV)

   [Option ID = 1540]

71) Match List I with List II :

	List I		List II
(A)	Firmware	(I)	Number of logical records into physical blocks
(B)	Batch file	(II)	ASCII format
(C)	Packing	(III)	Resource allocation
(D)	Banker's Algorithm	(IV)	ROM

Choose the correct answer from the options given below :

[Question ID = 386][Question Description = 171_87_Computer_Science_OCT22_Q71]

1. (A)-(II), (B)-(I), (C)-(IV), (D)-(III)

   [Option ID = 1541]
2. (A)-(II), (B)-(I), (C)-(III), (D)-(IV)

   [Option ID = 1542]
3. (A)-(IV), (B)-(II), (C)-(I), (D)-(III)

   [Option ID = 1543]
4. (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

   [Option ID = 1544]

72) Match List I with List II :

	List I		List II
(A)	DES	(I)	Key size - 256
(B)	AES	(II)	Key size - 1024
(C)	3 DES	(III)	Key size - 56
(D)	RSA	(IV)	Key size - 168

Choose the correct answer from the options given below :

[Question ID = 387][Question Description = 172_87_Computer_Science_OCT22_Q72]

1. (A)-(I), (B)-(II), (C)-(IV), (D)-(III)

   [Option ID = 1545]
2. (A)-(III), (B)-(I), (C)-(IV), (D)-(II)

   [Option ID = 1546]
3. (A)-(III), (B)-(IV), (C)-(II), (D)-(I)

   [Option ID = 1547]
4. (A)-(IV), (B)-(II), (C)-(III), (D)-(I)

   [Option ID = 1548]

73) Match List I with List II :

List I   List II

(A) BIND   (I)   Block the caller until a connection attempt arrives
(B) LISTEN   (II)   Give a local address to a socket
(C) ACCEPT   (III) Show willingness to accept connections
(D) SOCKET   (IV)   Create a new point

Choose the correct answer from the options given below :

[Question ID = 388][Question Description = 173_87_Computer_Science_OCT22_Q73]

1. (A)-(I), (B)-(III), (C)-(II), (D)-(IV)

[Option ID = 1549]

2. (A)-(II), (B)-(III), (C)-(I), (D)-(IV)

[Option ID = 1550]

3. (A)-(III), (B)-(II), (C)-(I), (D)-(IV)

[Option ID = 1551]

4. (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

[Option ID = 1552]

74) Match List I with List II :

List I   List II

(A) Physical layer   (I)   Routing of the signals divide the outgoing message into
                                packets. to act as network controller for routing data

(B) Data link layer   (II)   Make and break connections, define voltages and data
                                rates, convert data bits into electrical signal

(C) Network layer   (III) Synchronization. error detection and correction. To
                                assemble outgoing message into frames.

(D) Presentation layer   (IV)   It works as a translating layer

Choose the correct answer from the options given below :

[Question ID = 389][Question Description = 174_87_Computer_Science_OCT22_Q74]

1. (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

[Option ID = 1553]

2. (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

[Option ID = 1554]

3. (A)-(IV), (B)-(III), (C)-(I), (D)-(II)

[Option ID = 1555]

4. (A)-(II), (B)-(III), (C)-(I), (D)-(IV)

[Option ID = 1556]

75) Consider the following algorithms and their running times :

	Algorithms		Complexities
(A)	Breadth First Search	(I)	$\theta(v+E)$
(B)	Rabin-Karp Algorithm	(II)	$O(v+E)$
(C)	Depth-First Search	(III)	$\theta((n-m-1)m)$
(D)	Heap sort (worst case)	(IV)	$O(n^2)$
(E)	Quick sort (worst case)	(V)	$O(n \lg n)$

Which one of the following is correct ?

[Question ID = 390][Question Description = 175_87_Computer_Science_OCT22_Q75]

1. (A)-(III), (B)-(II), (C)-(I), (D)-(IV), (E)-(V)

[Option ID = 1557]

2. (A)-(II), (B)-(III), (C)-(I), (D)-(IV), (E)-(V)

[Option ID = 1558]

3. (A)-(II), (B)-(III), (C)-(I), (D)-(V), (E)-(IV)

[Option ID = 1559]

4. (A)-(III), (B)-(I), (C)-(II), (D)-(IV), (E)-(V)

[Option ID = 1560]

76) Consider the following:

	List I		List II
(A)	Stack algorithm	(I)	Deadlock
(B)	Elevator algorithm	(II)	Disk scheduling
(C)	Priority scheduling algorithm	(III)	Page replacement
(D)	Havender's algorithm	(IV)	CPU scheduling

Which of the following is correct matching?

[Question ID = 391][Question Description = 176_87_Computer_Science_OCT22_Q76]

1. (A)-(III), (B)-(II), (C)-(IV), (D)-(I)

[Option ID = 1561]

2. (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

[Option ID = 1562]

3. (A)-(III), (B)-(II), (C)-(I), (D)-(IV)

[Option ID = 1563]

4. (A)-(II), (B)-(III), (C)-(I), (D)-(IV)

[Option ID = 1564]

77) Consider the following statements of approximation algorithm :

Statement I :   Vertex-cover is a polynomial time 2-approximation algorithm.

Statement II :   TSP-tour is a polynomial time 3-approximation algorithm for travelling salesman problem with the triangle inequality.

Which of the following is correct?

[Question ID = 392][Question Description = 177_87_Computer_Science_OCT22_Q77]

1. Statement I true and Statement II false

   [Option ID = 1565]

2. Statement I and Statement II true

   [Option ID = 1566]

3. Statement I false and Statement II true

   [Option ID = 1567]

4. Statement I and Statement II false

   [Option ID = 1568]

78) Consider the following statements:

Statement I :   Conservative 2 PL is a deadlock-free protocol.

Statement II :   Thomas's write rule enforces conflict serializability.

Statement III :   Timestamp ordering protocol ensures serializability based on the order of transaction timestamps.

Which of the following is correct?

[Question ID = 393][Question Description = 178_87_Computer_Science_OCT22_Q78]

1. Statement I, Statement II true and Statement III false

   [Option ID = 1569]

2. Statement I, Statement III true and Statement II false

   [Option ID = 1570]

3. Statement I, Statement II false and Statement III true

   [Option ID = 1571]

4. Statement I, Statement II and Statement III true

   [Option ID = 1572]

79) Consider the following statements:

Statement I : Composite attributes cannot be divided into smaller subparts.

Statement II : Complex attribute is formed by nesting composite attributes and multi-valued attributes in an arbitrary way.

Statement III : A derived attribute is an attribute whose values are computed from other attribute.

Which of the following is correct?

[Question ID = 394][Question Description = 179_87_Computer_Science_OCT22_Q79]

1. Statement I, Statement II and Statement III are true

   [Option ID = 1573]
2. Statement I true and Statement II, Statement III false

   [Option ID = 1574]
3. Statement I, Statement II true and Statement III false

   [Option ID = 1575]
4. Statement I false and Statement II, Statement III true

   [Option ID = 1576]

80) A top down approach to programming calls for :

Statement I : Working from the general to the specific.

Statement II : Postpone the minor decisions.

Statement III : A systematic approach.

Statement IV : Intermediate coding of the problem

Which of the following is true?

[Question ID = 395][Question Description = 180_87_Computer_Science_OCT22_Q80]

1. Statement I only

   [Option ID = 1577]
2. Statement I and Statement II only

   [Option ID = 1578]
3. Statement I, Statement II and Statement III only

   [Option ID = 1579]
4. Statement I, Statement II and Statement IV only

   [Option ID = 1580]

81) Consider the following statements:

Statement I : LALR parser is more powerful than canonical LR Parser.

Statement II : SLR parser is more powerful than LALR

Which of the following is correct?

[Question ID = 396][Question Description = 181_87_Computer_Science_OCT22_Q81]

1. Statement I true and Statement II false

   [Option ID = 1581]
2. Statement I false and Statement II true

   [Option ID = 1582]
3. Both Statement I and Statement II false

   [Option ID = 1583]
4. Both Statement I and Statement II true

   [Option ID = 1584]

82) Consider the following statements about Context Free Language (CFL) :

Statement I : CFL is closed under homomorphism.

Statement II : CFL is closed under complement.

Which of the following is correct?

[Question ID = 397][Question Description = 182_87_Computer_Science_OCT22_Q82]

1. Statement I is true and Statement II is false

   [Option ID = 1585]
2. Statement II is true and Statement I is false

   [Option ID = 1586]
3. Both Statement I and Statement II are true

   [Option ID = 1587]
4. Neither Statement I nor Statement II is true

   [Option ID = 1588]

83) Consider the following in Boolean Algebra

X : $a \vee (b \wedge (a \vee c)) = (a \vee b) \wedge (a \vee c)$

Y : $a \wedge (b \vee (a \wedge c)) = (a \wedge b) \vee (a \wedge c)$

$a \vee (b \wedge c) = (a \vee b) \wedge c$ is satisfied if

[Question ID = 398][Question Description = 183_87_Computer_Science_OCT22_Q83]

1. X is true

   [Option ID = 1589]
2. Y is true

[Option ID = 1590]

3. Both X and Y are true

[Option ID = 1591]

4. It does not depend on X and Y

[Option ID = 1592]

84) A good software requirement specification does NOT have the characteristic

[Question ID = 399][Question Description = 184_87_Computer_Science_OCT22_Q84]

1. Completeness

[Option ID = 1593]

2. Consistency

[Option ID = 1594]

3. Clarity

[Option ID = 1595]

4. Reliability

[Option ID = 1596]

85) Given below are two statements : one is labelled as Assertion (A) and the other is labelled as Reason (R) :

Assertion (A) : $\overline{p}$

Reason (R) : $(r \rightarrow \overline{q}, r \vee s, s \rightarrow \overline{q}, p \rightarrow q)$

In the light of the above statements, choose the correct answer from the options given below :

[Question ID = 400][Question Description = 185_87_Computer_Science_OCT22_Q85]

1. Both (A) and (R) are true and (R) is the correct explanation of (A)

[Option ID = 1597]

2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A)

[Option ID = 1598]

3. (A) is true but (R) is false

[Option ID = 1599]

4. (A) is false but (R) is true

[Option ID = 1600]

86) Of the following, which is NOT a logical error?

[Question ID = 401][Question Description = 186_87_Computer_Science_OCT22_Q86]

1. Using the '=', instead of ' = =' to determine if two values are equal

[Option ID = 1601]

2. Divide by zero

[Option ID = 1602]

3. Failing to initialize counter and total variables before the body of loop

[Option ID = 1603]

4. Using commas instead of two required semicolon in a for loop header

[Option ID = 1604]

87) Given below are two statements : one is labelled as Assertion (A) and the other is labelled as Reason (R) :

Assertion (A) : A load-and-go assembler avoids the overhead of writing the object program out and reading it back in.

Reason (R) : This can be done with either one-pass or two pass assembler.

In the light of the above statements, choose the correct answer from the options given below :

[Question ID = 402][Question Description = 187_87_Computer_Science_OCT22_Q87]

1. Both (A) and (R) are true and (R) is the correct explanation of (A)

   [Option ID = 1605]

2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A)

   [Option ID = 1606]

3. (A) is true but (R) is false

   [Option ID = 1607]

4. (A) is false but (R) is true

   [Option ID = 1608]

88) Which statement is false?

[Question ID = 403][Question Description = 188_87_Computer_Science_OCT22_Q88]

1. All function calls in C pass arguments using call by value.

   [Option ID = 1609]

2. Call by reference enables a called function to modify a variable in calling function.

   [Option ID = 1610]

3. Call by value is always more efficient than call by reference.

   [Option ID = 1611]

4. Programmers use pointers and indirection operation to simulate call by reference.

   [Option ID = 1612]

89) Given below are two statements :

Statement I : "Grandparent is a parent of one's parent".

Statement II : First Order Predicate Logic (FOPL) representation of above statement is

$\forall g, c \; grandparent (g, c) \Leftrightarrow \exists p \; parent (g, p) \wedge parent (p, c)$

In the light of the above statements, choose the most appropriate answer from the options given below :

[Question ID = 404][Question Description = 189_87_Computer_Science_OCT22_Q89]

1. Both Statement I and Statement II are correct

   [Option ID = 1613]

2. Both Statement I and Statement II are incorrect

   [Option ID = 1614]

3. Statement I is correct but Statement II is incorrect

   [Option ID = 1615]

4. Statement I is incorrect but Statement II is correct

   [Option ID = 1616]

90) Given below are two statements :

Statement I : Consider 20 bit 'Branch' microinstruction code format given below:

3	3	3	2	2	7
F1	F2	F3	CD	BR	AD

F1, F2, F3 : Micro-operation fields

CD : Condition for branching

BR : Branch field

AD : Address field

Statement II : Instruction represented in above format can perform branch in 4 conditions.

In the light of the above statements, choose the most appropriate answer from the options given below :

[Question ID = 405][Question Description = 190_87_Computer_Science_OCT22_Q90]

1. Both Statement I and Statement II are correct

    [Option ID = 1617]
2. Both Statement I and Statement II are incorrect

    [Option ID = 1618]
3. Statement I is correct but Statement II is incorrect

    [Option ID = 1619]

4. Statement I is incorrect but Statement II is correct

    [Option ID = 1620]

Topic:- 87_PART_B_Set1

1)

Read the following and Answer the questions :

Consider the relational schema of sailors S, Reserves R and Boats B.

Table 1 : Sailors S

Sid	Sname	Ratting	Age
22	Dustin	7	45.0
29	Brutus	1	33.0
31	Lubber	8	55.5
32	Andy	8	25.5
58	Rusty	10	35.0
64	Horatio	7	35.0
71	Zorba	10	16.0
74	Horatio	9	35.0
85	Art	3	25.5
95	Bob	3	63.5

Table 2 : Reserves R

Sid	Bid	day
22	101	10/10/98
22	102	10/10/98
22	103	10/8/98
22	104	10/7/98
31	102	11/10/98
31	103	11/6/98
31	104	11/12/98
64	101	9/5/98
64	102	9/8/98
74	103	9/8/98

Table 3 : Boats B

Bid	Bname	Color
101	Interlake	blue
102	Interlake	red
103	Clipper	green
104	Marine	red

Which of the following relational algebra query computes the Sid's of sailors with age over 20 who have not reserved a red boat?

[Question ID = 406][Question Description = 191_87_Computer_Science_OCT22_Q91]

1. $\pi_{sid} (\delta_{age > 20} Sailors) - \pi_{sid} ((\delta_{color = 'red'} Boats) \bowtie Reserves \bowtie Sailors)$

[Option ID = 1621]

2. $\pi_{sid} ((\delta_{color = 'red' \wedge age > 20} (Boats \bowtie Sailors \bowtie Reserves)))$

[Option ID = 1622]

3. $\pi_{sid} (\delta_{age < 20} Sailors) - \pi_{sid} ((\delta_{color = 'red'} Boats) \bowtie Reserves \bowtie Sailors)$

[Option ID = 1623]

4. $\pi_{sid} (\delta_{age > 20} Sailors) \wedge \pi_{sid} ((\delta_{color \neq 'red'} Boats) \bowtie Reserves \bowtie Sailors)$

[Option ID = 1624]

2)

Read the following and Answer the questions :

Consider the relational schema of sailors S, Reserves R and Boats B.

Table 1 : Sailors S

Sid	Sname	Ratting	Age
22	Dustin	7	45.0
29	Brutus	1	33.0
31	Lubber	8	55.5
32	Andy	8	25.5
58	Rusty	10	35.0
64	Horatio	7	35.0
71	Zorba	10	16.0
74	Horatio	9	35.0
85	Art	3	25.5
95	Bob	3	63.5

Table 2 : Reserves R

Sid	Bid	day
22	101	10/10/98
22	102	10/10/98
22	103	10/8/98
22	104	10/7/98
31	102	11/10/98
31	103	11/6/98
31	104	11/12/98
64	101	9/5/98
64	102	9/8/98
74	103	9/8/98

Table 3 : Boats B

Bid	Bname	Color
101	Interlake	blue
102	Interlake	red
103	Clipper	green
104	Marine	red

Which of the following relational algebra query/queries computes/compute the names of sailors who have reserved a red boat?

Q1 π_{sname} (($\delta_{color = 'red'}$ Boats) $\bowtie$ Reserves $\bowtie$ Sailors)

Q2 π_{sname} (π_{sid} ((π_{bid} $\delta_{color = 'red'}$ Boats) $\bowtie$ Reserves) $\bowtie$ Sailors)

Q3 π_{sname} (($\delta_{color = 'red'}$ Reserves) Boats $\bowtie$ Sailors)

[Question ID = 407][Question Description = 192_87_Computer_Science_OCT22_Q92]

1. Both Q1 and Q2

   [Option ID = 1625]

2. Both Q2 and Q3

   [Option ID = 1626]

3. Only Q1

   [Option ID = 1627]

4. Only Q2

   [Option ID = 1628]

3) Read the following and Answer the questions :

Consider the relational schema of sailors S. Reserves R and Boats B.

Table 1 : Sailors S

Sid	Sname	Ratting	Age
22	Dustin	7	45.0
29	Brutus	1	33.0
31	Lubber	8	55.5
32	Andy	8	25.5
58	Rusty	10	35.0
64	Horatio	7	35.0
71	Zorba	10	16.0
74	Horatio	9	35.0
85	Art	3	25.5
95	Bob	3	63.5

Table 2 : Reserves R

Sid	Bid	day
22	101	10/10/98
22	102	10/10/98
22	103	10/8/98
22	104	10/7/98
31	102	11/10/98
31	103	11/6/98
31	104	11/12/98
64	101	9/5/98
64	102	9/8/98
74	103	9/8/98

Table 3 : Boats B

Bid	Bname	Color
101	Interlake	blue
102	Interlake	red
103	Clipper	green
104	Marine	red

Which of the following relational algebra query/queries computes/compute the name of sailors who have reserved boat 103?

Q1 $\pi_{sname}((\delta_{bid=103} \text{Boats}) \bowtie \text{Sailors})$

Q2 $\pi_{sname}(\delta_{bid=103}(\text{Reserves} \bowtie \text{Sailors}))$

Q3 $\pi_{sname}((\delta_{bid=103} \text{Reserves}) \bowtie \text{Sailors})$

[Question ID = 408][Question Description = 193_87_Computer_Science_OCT22_Q93]

1. Both Q1 and Q3

   [Option ID = 1629]
2. Both Q2 and Q3

   [Option ID = 1630]
3. Only Q3

   [Option ID = 1631]
4. Only Q2

   [Option ID = 1632]

4) Read the following and Answer the questions :

Consider the relational schema of sailors S. Reserves R and Boats B.

Table 1 : Sailors S

Sid	Sname	Ratting	Age
22	Dustin	7	45.0
29	Brutus	1	33.0
31	Lubber	8	55.5
32	Andy	8	25.5
58	Rusty	10	35.0
64	Horatio	7	35.0
71	Zorba	10	16.0
74	Horatio	9	35.0
85	Art	3	25.5
95	Bob	3	63.5

Table 2 : Reserves R

Sid	Bid	day
22	101	10/10/98
22	102	10/10/98
22	103	10/8/98
22	104	10/7/98
31	102	11/10/98
31	103	11/6/98
31	104	11/12/98
64	101	9/5/98
64	102	9/8/98
74	103	9/8/98

Table 3 : Boats B

Bid	Bname	Color
101	Interlake	blue
102	Interlake	red
103	Clipper	green
104	Marine	red

Which of the following relational algebra query computes the names of sailor who have reserved all boats?

[Question ID = 409][Question Description = 194_87_Computer_Science_OCT22_Q94]

1. ρ (Tempsids, (π_{bid} Reserves) / π_{bid} Boats) π_{sname} ((Tempsids) $\bowtie$ Sailors)

   [Option ID = 1633]

2. ρ (Tempsids, ($\pi_{sid, bid}$ Reserves) / π_{bid} Boats) π_{sname} ((Tempsids) $\bowtie$ Sailors)

   [Option ID = 1634]

3. ρ (Tempsids, (π_{sid} Sailors) / π_{bid} Boats) π_{sname} ((Tempsids) $\bowtie$ Sailors)

   [Option ID = 1635]

4. ρ (Tempsids, (π_{sid} Reserves) / π_{bid} Boats) π_{sname} ((Tempsids) $\bowtie$ Boats)

   [Option ID = 1636]

5) Read the following and Answer the questions :

Consider the relational schema of sailors S, Reserves R and Boats B.

Table 1 : Sailors S

Sid	Sname	Ratting	Age
22	Dustin	7	45.0
29	Brutus	1	33.0
31	Lubber	8	55.5
32	Andy	8	25.5
58	Rusty	10	35.0
64	Horatio	7	35.0
71	Zorba	10	16.0
74	Horatio	9	35.0
85	Art	3	25.5
95	Bob	3	63.5

Table 2 : Reserves R

Sid	Bid	day
22	101	10/10/98
22	102	10/10/98
22	103	10/8/98
22	104	10/7/98
31	102	11/10/98
31	103	11/6/98
31	104	11/12/98
64	101	9/5/98
64	102	9/8/98
74	103	9/8/98

Table 3 : Boats B

Bid	Bname	Color
101	Interlake	blue
102	Interlake	red
103	Clipper	green
104	Marine	red

Which of the following relational algebra query computes the names of sailors who have reserved a red and a green boat?

[Question ID = 410][Question Description = 195_87_Computer_Science_OCT22_Q95]

1. ρ (Tempred, π_{sid} (($\delta_{color = 'red'}$ Boats) $\bowtie$ Reserves)), ρ (Tempgreen, π_{sid} (($\delta_{color = 'green'}$ Boats) $\bowtie$ Reserves)), π_{sname} (Tempred $\cap$ Tempgreen) $\bowtie$ Sailors

[Option ID = 1637]

2. ρ (Tempboats 2, ($\delta_{color = 'red'}$ Boats) $\cap$ ($\delta_{color = 'green'}$ Boats)) π_{sname} (Tempboats 2 $\bowtie$ Reserves)

[Option ID = 1638]

3. π_{sname} (($\delta_{color = 'red'}$ Boats) $\cap$ ($\delta_{color = 'green'}$ Boats) (Tempboats 2 $\bowtie$ Sailors $\bowtie$ Reserves))

[Option ID = 1639]

4. ρ (Tempboats 2, ($\delta_{color = 'red' \wedge color = 'green'}$ Boats) π_{sname} (Tempboats 2 $\bowtie$ Sailors)

[Option ID = 1640]

Topic:- 87_PART_C_Set1

1) Based on the following passage, answer the Questions :

A 3000 km long trunk operates at 1.536 mbps and is used to transmit 64 bytes frames and uses sliding window protocol. The propagation speed is 6 μ sec/km.

The transmission and propagation delays are respectively

[Question ID = 411][Question Description = 196_87_Computer_Science_OCT22_Q96]

1. $T_t = 333.33\ \mu\sec,\ T_p = 18000\ \mu\sec$

    [Option ID = 1641]

2. $T_t = 300\ \mu\sec,\ T_p = 15360\ \mu\sec$

    [Option ID = 1642]

3. $T_t = 33.33\ \mu\sec,\ T_p = 1800\ \mu\sec$

    [Option ID = 1643]

4. $T_t = 1800\ \mu\sec,\ T_p = 33.33\ \mu\sec$

    [Option ID = 1644]

2) Based on the following passage, answer the Questions :

A 3000 km long trunk operates at 1.536 mbps and is used to transmit 64 bytes frames and uses sliding window protocol. The propagation speed is 6 μ sec/km.

The minimum number of bits required in the sequence number field of the packet is

[Question ID = 412][Question Description = 197_87_Computer_Science_OCT22_Q97]

1. 6 bits

    [Option ID = 1645]

2. 7 bits

    [Option ID = 1646]

3. 5 bits

    [Option ID = 1647]

4. 4 bits

    [Option ID = 1648]

3) Based on the following passage, answer the Questions :

A 3000 km long trunk operates at 1.536 mbps and is used to transmit 64 bytes frames and uses sliding window protocol. The propagation speed is 6 μ sec/km.

The sender window size to get the maximum efficiency is

[Question ID = 413][Question Description = 198_87_Computer_Science_OCT22_Q98]

1. 108

    [Option ID = 1649]

2. 109

    [Option ID = 1650]

3. 55

    [Option ID = 1651]

4. 56

    [Option ID = 1652]

4) Based on the following passage, answer the Questions :

A 3000 km long trunk operates at 1.536 mbps and is used to transmit 64 bytes frames and uses sliding window protocol. The propagation speed is 6 μ sec/km.

If only 6 bits are reserved for sequence number field, then the efficiency of the system is

[Question ID = 414][Question Description = 199_87_Computer_Science_OCT22_Q99]

1. 0.587

   [Option ID = 1653]

2. 0.875

   [Option ID = 1654]

3. 0.578

   [Option ID = 1655]

4. 0.50

   [Option ID = 1656]

5) Based on the following passage, answer the Questions :

A 3000 km long trunk operates at 1.536 mbps and is used to transmit 64 bytes frames and uses sliding window protocol. The propagation speed is 6 μ sec/km.

The maximum achievable throughput is

[Question ID = 415][Question Description = 200_87_Computer_Science_OCT22_Q100]

1. 0.768

   [Option ID = 1657]

2. 0.678

   [Option ID = 1658]

3. 0.901

   [Option ID = 1659]

4. 0.887

   [Option ID = 1660]

Topic:- 11_GP_SH1_Set1_A

1) The following table shows the percentage (%) distribution of total number of students and total number of girls studying in six colleges A-F. Total number of students and girls studying in all the colleges together are 60000 and 24000 respectively. Based on the data in the table, answer the questions 1-5:

College-wise Distribution of Students

College	Distribution (%)	
	Students (out of 60000)	Girls (out of 24000)
A	10%	15%
B	9%	12%
C	23%	18%
D	18%	14%
E	16%	20%
F	24%	21%

निम्नलिखित तालिका छह महाविद्यालयों A-F में अध्ययनरत विद्यार्थियों की कुल संख्या और लड़कियों की कुल संख्या का वितरण प्रतिशत (%) दर्शाती है। सभी महाविद्यालयों में अध्ययनरत विद्यार्थियों और लड़कियों की कुल संख्या क्रमशः 60000 और 24000 है। तालिका के डाटा के आधार पर प्रश्न 1-5 के उत्तर दीजिए:

महाविद्यालय-वार विद्यार्थियों का वितरण

महाविद्यालय	वितरण (%)	
	विद्यार्थी (60000 में से)	लड़कियां (24000 में से)
A	10%	15%
B	9%	12%
C	23%	18%
D	18%	14%
E	16%	20%
F	24%	21%

The difference between the number of boys and number of girls studying in College D is

महाविद्यालय D में अध्ययनरत लड़कों की संख्या और लड़कियों के संख्या के बीच का अंतर कितना है?

[Question ID = 516][Question Description = 101_00_General_19_SEPT22_Q01]

1. 4040

   [Option ID = 2061]

2. 4080

   [Option ID = 2062]

3. 7440

   [Option ID = 2063]

4. 3360

   [Option ID = 2064]

2)

The following table shows the percentage (%) distribution of total number of students and total number of girls studying in six colleges A-F. Total number of students and girls studying in all the colleges together are 60000 and 24000 respectively. Based on the data in the table, answer the questions 1-5:

College-wise Distribution of Students

College	Distribution (%)	
	Students (out of 60000)	Girls (out of 24000)
A	10%	15%
B	9%	12%
C	23%	18%
D	18%	14%
E	16%	20%
F	24%	21%

निम्नलिखित तालिका छह महाविद्यालयों A-F में अध्ययनरत विद्यार्थियों की कुल संख्या और लड़कियों की कुल संख्या का वितरण प्रतिशत (%) दर्शाती है। सभी महाविद्यालयों में अध्ययनरत विद्यार्थियों और लड़कियों की कुल संख्या क्रमशः 60000 और 24000 है। तालिका के डाटा के आधार पर प्रश्न 1–5 के उत्तर दीजिए।

महाविद्यालय-वार विद्यार्थियों का वितरण

महाविद्यालय	वितरण (%)	
	विद्यार्थी (60000 में से)	लड़कियां (24000 में से)
A	10%	15%
B	9%	12%
C	23%	18%
D	18%	14%
E	16%	20%
F	24%	21%

The number of girl students studying in College C as a percentage of the number of boys studying in College E is

महाविद्यालय E में अध्ययनरत लड़कों की संख्या के प्रतिशत के रूप में महाविद्यालय C में अध्ययनरत छात्राओं की संख्या कितनी है?

[Question ID = 517][Question Description = 102_00_General_19_SEPT22_Q02]

1. 70 %

[Option ID = 2065]

2. 75%

[Option ID = 2066]

3. 80%

[Option ID = 2067]

4. 90%

[Option ID = 2068]

3)

The following table shows the percentage (%) distribution of total number of students and total number of girls studying in six colleges A-F. Total number of students and girls studying in all the colleges together are 60000 and 24000 respectively. Based on the data in the table, answer the questions 1-5:

College-wise Distribution of Students

College	Distribution (%)	
	Students (out of 60000)	Girls (out of 24000)
A	10%	15%
B	9%	12%
C	23%	18%
D	18%	14%
E	16%	20%
F	24%	21%

निम्नलिखित तालिका छह महाविद्यालयों A-F में अध्ययनरत विद्यार्थियों की कुल संख्या और लड़कियों की कुल संख्या का वितरण प्रतिशत (%) दर्शाती है। सभी महाविद्यालयों में अध्ययनरत विद्यार्थियों और लड़कियों की कुल संख्या क्रमशः 60000 और 24000 है। तालिका के डाटा के आधार पर प्रश्न 1-5 के उत्तर दीजिए:

महाविद्यालय-वार विद्यार्थियों का वितरण

महाविद्यालय	वितरण (%)	
	विद्यार्थी (60000 में से)	लड़कियां (24000 में से)
A	10%	15%
B	9%	12%
C	23%	18%
D	18%	14%
E	16%	20%
F	24%	21%

The average of the number of boys studying in Colleges A, B and C is

A, B और C महाविद्यालयों में अध्ययनरत लड़कों की संख्या का औसत कितना है?

[Question ID = 518][Question Description = 103_00_General_19_SEPT22_Q03]

1. 4900

    [Option ID = 2069]

2. 4700

    [Option ID = 2070]

3. 4400

    [Option ID = 2071]

4. 4800

    [Option ID = 2072]

4)

The following table shows the percentage (%) distribution of total number of students and total number of girls studying in six colleges A-F. Total number of students and girls studying in all the colleges together are 60000 and 24000 respectively. Based on the data in the table, answer the questions 1-5:

College-wise Distribution of Students

College	Distribution (%)	
	Students (out of 60000)	Girls (out of 24000)
A	10%	15%
B	9%	12%
C	23%	18%
D	18%	14%
E	16%	20%
F	24%	21%

निम्नलिखित तालिका छह महाविद्यालयों A-F में अध्ययनरत विद्यार्थियों की कुल संख्या और लड़कियों की कुल संख्या का वितरण प्रतिशत (%) दर्शाती है। सभी महाविद्यालयों में अध्ययनरत विद्यार्थियों और लड़कियों की कुल संख्या क्रमशः 60000 और 24000 है। तालिका के डाटा के आधार पर प्रश्न 1-5 के उत्तर दीजिए।

महाविद्यालय-वार विद्यार्थियों का वितरण

महाविद्यालय	वितरण (%)	
	विद्यार्थी (60000 में से)	लड़कियां (24000 में से)
A	10%	15%
B	9%	12%
C	23%	18%
D	18%	14%
E	16%	20%
F	24%	21%

The number of girls in College F is..........% more than the number of girls in College A.

महाविद्यालय F में लड़कियों की संख्या महाविद्यालय A में लड़कियों की संख्या से कितने प्रतिशत अधिक है?

[Question ID = 519][Question Description = 104_00_General_19_SEPT22_Q04]

1. 25

   [Option ID = 2073]
2. 30

   [Option ID = 2074]
3. 40

   [Option ID = 2075]
4. 50

   [Option ID = 2076]

5)

The following table shows the percentage (%) distribution of total number of students and total number of girls studying in six colleges A-F. Total number of students and girls studying in all the colleges together are 60000 and 24000 respectively. Based on the data in the table, answer the questions 1-5:

College-wise Distribution of Students

College	Distribution (%)	
	Students (out of 60000)	Girls (out of 24000)
A	10%	15%
B	9%	12%
C	23%	18%
D	18%	14%
E	16%	20%
F	24%	21%

निम्नलिखित तालिका छह महाविद्यालयों A-F में अध्ययनरत विद्यार्थियों की कुल संख्या और लड़कियों की कुल संख्या का वितरण प्रतिशत (%) दर्शाती है। सभी महाविद्यालयों में अध्ययनरत विद्यार्थियों और लड़कियों की कुल संख्या क्रमशः 60000 और 24000 है। तालिका के डाटा के आधार पर प्रश्न 1-5 के उत्तर दीजिए।

महाविद्यालय-वार विद्यार्थियों का वितरण

महाविद्यालय	वितरण (%)	
	विद्यार्थी (60000 में से)	लड़कियां (24000 में से)
A	10%	15%
B	9%	12%
C	23%	18%
D	18%	14%
E	16%	20%
F	24%	21%

The ratio of the number of boys in College F with the number of boys in College D is

महाविद्यालय F में लड़कों की संख्या का महाविद्यालय D में लड़कों की संख्या से अनुपात कितना है?

[Question ID = 520][Question Description = 105_00_General_19_SEPT22_Q05]

1. 31:39

   [Option ID = 2077]
2. 39:31

   [Option ID = 2078]
3. 29:37

   [Option ID = 2079]
4. 37:29

   [Option ID = 2080]

Topic:- 11_GP_SH1_Set1_B

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1) In order to develop students holistically a teacher should emphasise on

विद्यार्थियों के समग्र रूप से विकास के लिए किसी शिक्षक को निम्न में से किस पर जोर देना चाहिए?

[Question ID = 521][Question Description = 106_00_General_19_SEPT22_Q06]

1. subject knowledge only

   केवल विषय का ज्ञान

   [Option ID = 2081]
2. remedial classes for slow learners

   मंद अधिगमकर्ताओं के लिए उपचारात्मक कक्षाएं

   [Option ID = 2082]
3. explain the concept well

   अवधारणा को भली-भांति स्पष्ट करना

   [Option ID = 2083]
4. outcome based education along with value education

   मूल्यों संबंधी शिक्षा के साथ-साथ परिणाम आधारित शिक्षा

[Option ID = 2084]

2) Which of the following levels of Bloom's taxonomy is achieved by rote learning?

रटने के अधिगम द्वारा निम्नलिखित में से ब्लूम के वर्गीकरण का कौन-सा स्तर प्राप्त किया जाता है?

[Question ID = 522][Question Description = 107_00_General_19_SEPT22_Q07]

1. Remembering

   स्मरण करना

   [Option ID = 2085]

2. Applying

   प्रयोग करना

   [Option ID = 2086]

3. Analysing

   विश्लेषण करना

   [Option ID = 2087]

4. Understanding

   समझना

   [Option ID = 2088]

3) Match List I with List II :

	List I (Learning Definitions)		List II (Proponent)
(A)	Learning is an organization of behaviour.	(I)	Guilford
(B)	Learning is the change in behaviour resulting from behaviour.	(II)	Skinner
(C)	Learning is selecting the appropriate response and connecting with the stimulus.	(III)	Garret
(D)	Learning is a process of progressive behaviour adaption.	(IV)	Thorndike

Choose the correct answer from the options given below :

सूची-I के साथ का सूची-II मिलान कीजिए :

	सूची-I (अधिगम की परिभाषाएं)		सूची-II (प्रति पादक)
(A)	अधिगम व्यवहार का संगठन है	(I)	गिलफोर्ड
(B)	अधिगम व्यवहार के परिणामस्वरूप व्यवहार में परिवर्तन है।	(II)	स्किनर
(C)	अधिगम समुचित प्रत्युत्तर का चयन करना और उसे उद्दीपक से जोड़ना है।	(III)	गैरेट
(D)	अधिगम प्रगतिशील व्यवहार अनुकूलन की एक प्रक्रिया है।	(IV)	थोर्नडाइक

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए :

[Question ID = 523][Question Description = 108_00_General_19_SEPT22_Q08]

1. (A)-(I), (B)-(III), (C)-(II), (D)-(IV)

[Option ID = 2089]

2. (A)-(IV). (B)-(III). (C)-(II). (D)-(I)

[Option ID = 2090]

3. (A)-(III). (B)-(IV). (C)-(I). (D)-(II)

[Option ID = 2091]

4. (A)-(III), (B)-(I). (C)-(IV). (D)-(II)

[Option ID = 2092]

4) Which of the following is a Group-centered method of teaching-learning?

निम्नलिखित में कौन–सी शिक्षण–अधिगम की एक समूह–केन्द्रित पद्धति है?

[Question ID = 524][Question Description = 109_00_General_19_SEPT22_Q09]

1. Providing lecture notes

   व्याख्यान नोट्स प्रदान करना

   [Option ID = 2093]

2. Team-teaching

   टीम–शिक्षण

   [Option ID = 2094]

3. Demonstration method

   प्रदर्शन पद्धति

   [Option ID = 2095]

4. Brainstorming

   विचार–मंथन

   [Option ID = 2096]

5) Given below are two statements : One is labelled as Assertion A and the other is labelled as Reason R.

Assertion (A) :   Discussion forums are one of the Four Quadrants for MOOC.

Reasons (R) :   Discussion forums are in-built feature of learning management systems (LMS).

In the light of the above statements. choose the *most appropriate answer* from the options given below :

नीचे दो कथन दिए गए हैं : एक अभिकथन (Assertion (A)) के रूप में लिखित है तो दूसरा उसके कारण (Reasons (R)) के रूप में :

अभिकथन (A) :   चर्चा मंच मूक के लिए चार चतुर्थांशों में से एक हैं।

कारण (R) :   चर्चा मंच अधिगम प्रबंधन प्रणालियों (एलएमएस) की अंतर्निहित विशेषतायें हैं।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए

[Question ID = 525][Question Description = 110_00_General_19_SEPT22_Q10]

1. Both (A) and (R) are correct and (R) is the correct explanation of (A)

(A) और (R) दोनों सही हैं और (R), (A) की सही व्याख्या है

[Option ID = 2097]

2. Both (A) and (R) are correct but (R) is NOT the correct explanation of (A)

(A) और (R) दोनों सही हैं, लेकिन (R), (A) की सही व्याख्या नहीं है

[Option ID = 2098]

3. (A) is correct but (R) is not correct

(A) सही है, लेकिन (R) सही नहीं है

[Option ID = 2099]

4. (A) is not correct but (R) is correct

(A) सही नहीं है, लेकिन (R) सही है

[Option ID = 2100]

6) Responses to open-ended questions are

मुक्तोत्तरित प्रश्नों के प्रति अनुक्रियाएँ होती हैं:

[Question ID = 526][Question Description = 111_00_General_19_SEPT22_Q11]

1. Quantifiable

परिमाणात्मक (क्वांटिफिएबल)

[Option ID = 2101]

2. Realistic

यथार्थबादी

[Option ID = 2102]

3. Subjective

विषयनिष्ठ

[Option ID = 2103]

4. Imitative

अनुकरणात्मक

[Option ID = 2104]

7) Which one of the following is a tool of grounded theory?

आधारिक सिद्धांत का निम्नलिखित में से कौनसा साधन (टूल) है?

[Question ID = 527][Question Description = 112_00_General_19_SEPT22_Q12]

1. Constant comparison

निरंतर तुलना

[Option ID = 2105]

2. Auditing

लेखा परीक्षा

[Option ID = 2106]

3. Deconstruction of narratives

आख्यानों का विनिर्मितीकरण (डिकन्स्ट्रक्शन)

[Option ID = 2107]

4. Use of uncritical language

अविवेचनात्मक (अनक्रिटिकल) भाषा का प्रयोग

[Option ID = 2108]

8) Which of the following are sources of data in historical research?

(A) Personal observation
(B) Focused group discussion
(C) Oral testimony
(D) Relics
(E) Actuaries

Choose the *correct answer* from the options given below :

ऐतिहासिक शोध में डेटा के निम्नलिखित में से कौन से स्रोत हैं?

(A) निजी पर्यवेक्षण
(B) केन्द्रित (फोकस्ड) समूह चर्चा
(C) मौखिक साक्ष्य
(D) स्मृति चिन्ह
(E) बीमांकक

दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

[Question ID = 528][Question Description = 113_00_General_19_SEPT22_Q13]

1. A. B. C Only

केवल A, B, C

[Option ID = 2109]

2. B, C, D Only

केवल B, C, D

[Option ID = 2110]

3. A, C, D Only

केवल A, C, D

[Option ID = 2111]

4. C, D, E Only

केवल C, D, E

[Option ID = 2112]

9) Which of the following are the actions of an ethnographic researcher?

(A) He gets immersed in the Social Setting.

(B) He avoids collecting documents about the group members he is researching upon.

(C) He observes the behaviour of group members.

(D) He listens to their conversation.

(E) He does not interview the participants when they are not amenable to observation.

Choose the *correct answer* from the options given below :

निम्नलिखित में से कौनसे मानवजाति के विवरण संबंधी शोधकर्ता के कार्य हैं?

(A) वह सामाजिक परिवेश में तल्लीन हो जाता है।

(B) वह उन समूहों के सदस्यों के बारे में दस्तावेजों के संग्रहण से बचता है, जिन पर वह शोध कर रहा होता है।

(C) वह समूह के सदस्यों के व्यवहार का पर्यवेक्षण करता है।

(D) वह उनके वार्तालाप पर ध्यान देता है।

(E) वह प्रतिभागियों का साक्षात्कार नहीं लेता है, जब वे पर्यवेक्षण के अधीन नहीं रहते हैं।

दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

[Question ID = 529][Question Description = 114_00_General_19_SEPT22_Q14]

1. A. B. C Only

केवल A. B. C

[Option ID = 2113]

2. A. C. D Only

केवल A. C. D

[Option ID = 2114]

3. B. C. D Only

केवल B. C. D

[Option ID = 2115]

4. C. D. E Only

केवल C. D. E

[Option ID = 2116]

10) Given below are two statements :

Statement I : Non-probability samples use available respondents and no specific Selection procedure is followed.

Statement II : It is a fact that non-probability samples accurately reflect the population characteristics.

In the light of the above statements, choose the *correct answer* from the options given below :

नीचे दो कथन दिए गए हैं :

कथन I :   असंभाव्यता प्रतिदर्श उपलब्ध उत्तरदाताओं का उपयोग करते हैं और किसी विशिष्ट चयन पद्धति का अनुसरण नहीं

किया जाता है।

कथन II :   यह एक तथ्य है कि असंभाव्यता प्रतिदर्श परिशुद्ध ढंग से जनसंख्या की विशेषताओं को प्रतिबिंबित करता है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए :

[Question ID = 530][Question Description = 115_00_General_19_SEPT22_Q15]

1. Both Statement I and Statement II are true

   कथन I और II दोनों सत्य हैं

   [Option ID = 2117]

2. Both Statement I and Statement II are false

   कथन I और II दोनों असत्य हैं

   [Option ID = 2118]

3. Statement I is true but Statement II is false

   कथन I सत्य है, लेकिन कथन II असत्य है

   [Option ID = 2119]

4. Statement I is false but Statement II is true

   कथन I असत्य है, लेकिन कथन II सत्य है

   [Option ID = 2120]

11) Communication apprehension is often described as

संप्रेषण अवबोध प्रायः इस रूप में वर्णित होता है:-

[Question ID = 531][Question Description = 116_00_General_19_SEPT22_Q16]

1. Social relativity

   सामाजिक सापेक्षता

   [Option ID = 2121]

2. Psycho-social barrier

   मनो-सामाजिक बाधाएं

   [Option ID = 2122]

3. Social anxiety

   सामाजिक दुश्चिंता

   [Option ID = 2123]

4. Social ambiguity

सामाजिक संदिग्धार्थता

[Option ID = 2124]

12) The grapevine communication is often driven by

जन-प्रवाद (ग्रेपवाइन) संप्रेषण प्राय: इससे संचालित होता है

[Question ID = 532][Question Description = 117_00_General_19_SEPT22_Q17]

1. External professional agencies

    बाह्य व्यावसायिक ऐजेंसियों से

    [Option ID = 2125]

2. Competing organisations

    प्रतिस्पर्धी संगठनों से

    [Option ID = 2126]

3. Top management of an organisation

    किसी संगठन के उच्च प्रबंधन से

    [Option ID = 2127]

4. Social networks of employess

    कर्मचारियों के सामाजिक नेटवर्क से

    [Option ID = 2128]

13) Human communication involves

    (A)   Message transmission

    (B)   Message reception

    (C)   Verbal and non-verbal messages

    (D)   Power-packed messages only

    (E)   Messages for non-consumption

Choose the *correct answer* from the options given below :

मानव संप्रेषण में शामिल होते हैं:

    (A)   संदेश प्रेषण

    (B)   संदेश ग्रहण

    (C)   शाब्दिक और गैर-शाब्दिक संदेश

    (D)   केवल शक्ति संपन्न (पावर-पैक्ड) संदेश

    (E)   गैर-उपभोग हेतु संदेश

दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

[Question ID = 533][Question Description = 118_00_General_19_SEPT22_Q18]

1. A, B, C Only

    केवल A, B, C

    [Option ID = 2129]

2. B, C, D Only

केवल B, C, D

[Option ID = 2130]

3. B, D, E Only

केवल B, D, E

[Option ID = 2131]

4. A, C, E Only

केवल A, C, E

[Option ID = 2132]

14) Given below are two statements :

Statement I : In symbolic communication, power operates through images.

Statement II : Such an advantage of exercising power does not exist in other types of communication.

In the light of the above statements, choose the *correct answer* from the options given below :

नीचे दो कथन दिए गए हैं :

कथन I : प्रतीकात्मक संप्रेषण में, शक्ति छवियों के माध्यम से संचालित होती है।

कथन II : शक्ति प्रयोग का इस प्रकार का लाभ संप्रेषण के अन्य प्रकारों में विद्यमान नहीं होता है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए :

[Question ID = 534][Question Description = 119_00_General_19_SEPT22_Q19]

1. Both Statement I and Statement II are true

कथन I और II दोनों सत्य हैं

[Option ID = 2133]

2. Both Statement I and Statement II are false

कथन I और II दोनों असत्य हैं

[Option ID = 2134]

3. Statement I is true but Statement II is false

कथन I सत्य है, लेकिन कथन II असत्य है

[Option ID = 2135]

4. Statement I is false but Statement II is true

कथन I असत्य है, लेकिन कथन II सत्य है

[Option ID = 2136]

15)

Match List I with List II :

List I (Communication context)		List II (Related factor)	
(A)	Physical	(I)	Group norms
(B)	Cultural	(II)	Sequential positioning
(C)	Social and Psychological	(III)	Tangible environment
(D)	Temporal	(IV)	Value system

Choose the correct answer from the options given below :

सूची-I के साथ का सूची-II मिलान कीजिए :

सूची-I (संप्रेषण संदर्भ)		सूची-II (संबंधित कारक)	
(A)	भौतिक	(I)	समूह मानक
(B)	सांस्कृतिक	(II)	अनुक्रमिक अवस्थितिकरण
(C)	सामाजिक और मनोवैज्ञानिक	(III)	मूर्त पर्यावरण
(D)	कालिक	(IV)	मूल्य प्रणाली

नीचे दिए गए विकल्पों में से <u>सही उत्तर</u> का चयन कीजिए :

[Question ID = 535][Question Description = 120_00_General_19_SEPT22_Q20]

1. (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

[Option ID = 2137]

2. (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

[Option ID = 2138]

3. (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

[Option ID = 2139]

4. (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

[Option ID = 2140]

16) Find the average of the squares of the consecutive odd numbers from 1 to 21.

1 से 21 के बीच क्रमिक विषम संख्याओं के वर्गों का औसत ज्ञात कीजिये।

[Question ID = 536][Question Description = 121_00_General_19_SEPT22_Q21]

1. 162

[Option ID = 2141]

2. 159

[Option ID = 2142]

3. 161

[Option ID = 2143]

4. 160

[Option ID = 2144]

17) Two numbers are in the ratio of 7:8 . If the difference between the numbers is 30. then find the numbers.

दो संख्याएँ 7:8 के अनुपात में दी गई है। यदि इन संख्याओं के बीच का अन्तर 30 है, तो संख्याओं को बताइये।

[Question ID = 537][Question Description = 122_00_General_19_SEPT22_Q22]

1. 215, 245

   [Option ID = 2145]
2. 205, 235

   [Option ID = 2146]
3. 220, 250

   [Option ID = 2147]
4. 210, 240

   [Option ID = 2148]

18) Two Shopkeepers 'A' amd 'B' sell certain kind of machines at the same list price. However. shopkeeper 'A' allows two successive discounts of 20% and 15% and shopkeeper 'B' allows two successive discounts of 10% and 25% . Which of the following statements is correct?

'A' और 'B' दो दुकानदार निश्चित प्रकार की मशीनों को समान सूची मूल्य पर बेचते हैं। फिर भी, दुकानदार 'A' 20% और 15% की दो क्रमिक छूट देता है और दुकानदार 'B' 10% और 25% की दो क्रमिक छूट देता है। निम्नलिखित कथनों में से कौन सा सही है?

[Question ID = 538][Question Description = 123_00_General_19_SEPT22_Q23]

1. 'A' offers more discount

   'A' अधिक छूट देता है

   [Option ID = 2149]
2. 'B' offers more discount

   'B' अधिक छूट देता है

   [Option ID = 2150]
3. Both 'A' and 'B' offers same discount

   'A' और 'B' समान छूट देते हैं

   [Option ID = 2151]
4. 'A' offers 35% discount and 'B' offers 30% discount

   'A' 35% छूट देता है और 'B' 30% छूट देता है

   [Option ID = 2152]

19) At what percent of compound interest per annum. a sum of money will double in 14 years?

कितने प्रतिशत की वार्षिक चक्रवृद्धि व्याज की दर से एक धन-राशि 14 वर्षों में दो गुनी हो जायेगी?

[Question ID = 539][Question Description = 124_00_General_19_SEPT22_Q24]

1. 4%

   [Option ID = 2153]
2. 5%

[Option ID = 2154]
3. 6%

[Option ID = 2155]
4. 6.5%

[Option ID = 2156]

20) Find the wrong term in the given series: 6, 11, 18, 27, 34, 51, 66, 83

दी गई श्रृंखला में गलत पद का पता लगाइये: 6, 11, 18, 27, 34, 51, 66, 83

[Question ID = 540][Question Description = 125_00_General_19_SEPT22_Q25]
1. 34

[Option ID = 2157]
2. 51

[Option ID = 2158]
3. 83

[Option ID = 2159]
4. 11

[Option ID = 2160]

21) If the statement 'All women are honest' is given as true, which of the following propositions can be inferred from it?

   (A)   'No women is honest' is false.
   (B)   'Some women are honest' is true.
   (C)   'No women is honest' is undetermined
   (D)   'Some women are not honest' is false

Choose the *correct answer* from the options given below :

यदि यह कथन– 'सभी महिलाएँ ईमानदार हैं' सही के रूप में दिया गया है तो उससे निम्नलिखित में से कौनसी प्रतिज्ञप्तियों का अनुमान किया जा सकता है?

   (A)   'कोई भी महिला ईमानदार नहीं है,' गलत है।
   (B)   'कुछ महिलाएं ईमानदार हैं,' सही है।
   (C)   'कोई भी महिला ईमानदार नहीं है,' अनिर्धारित है।
   (D)   'कुछ महिलाएं ईमानदार नहीं है,' गलत है।

दिए गए विकल्पों में से <u>सही उत्तर</u> का चयन कीजिए:

[Question ID = 541][Question Description = 126_00_General_19_SEPT22_Q26]
1. A, B, D Only

   केवल A, B, D

[Option ID = 2161]
2. B and D Only

   केवल B और D

[Option ID = 2162]

3. B. C and D Only

केवल B. C. और D

[Option ID = 2163]

4. C and D Only

केवल C और D

[Option ID = 2164]

22) Given below are two statements :

Statement I : To form the contrapositive of a given proposition, we replace its subject term with the complement of its predicate term, and we replace its predicate term with the complement of its subject term.

Statement II : All contra positions are valid.

In the light of the above statements, choose the *correct answer* from the options given below :

नीचे दो कथन दिए गए हैं :

कथन I : हम एक दी गई प्रतिज्ञप्ति को प्रतिवर्तक बनाने के लिए उसके विषय पद को उसके विधेय पद के पूरक से प्रतिस्थापित करते हैं और, हम उसके विधेय पद को उसके विषय पद के पूरक से प्रतिस्थापित करते हैं।

कथन II : सभी प्रतिवर्तक वैध हैं।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए :

[Question ID = 542][Question Description = 127_00_General_19_SEPT22_Q27]

1. Both Statement I and Statement II are true

कथन I और II दोनों सत्य हैं

[Option ID = 2165]

2. Both Statement I and Statement II are false

कथन I और II दोनों असत्य हैं

[Option ID = 2166]

3. Statement I is true but Statement II is false

कथन I सत्य है, लेकिन कथन II असत्य है

[Option ID = 2167]

4. Statement I is false but Statement II is true

कथन I असत्य है, लेकिन कथन II सत्य है

[Option ID = 2168]

23) Which of the logical informal fallacy is committed in the following argument "Mr. X used abusive language toward the child who threw a stone at his car. Since child abuse is a crime, he should be reported to the authorities"?

निम्नलिखित युक्ति में कौनसा तार्किक अनाकारिक दोष किया गया है– ''मिस्टर एक्स ने उस बच्चे के प्रति दुर्व्यवहारिक भाषा का प्रयोग किया, जिसने उसकी कार पर एक पत्थर फेंका था। चूंकि बाल दुर्व्यवहार एक अपराध है, इसलिए उसके बारे में प्राधिकारी को सूचना देनी चाहिए'' ?

[Question ID = 543][Question Description = 128_00_General_19_SEPT22_Q28]

1. Appeal to Emotion

   मनोभाव आग्रह

   [Option ID = 2169]

2. Hasty generalisation

   अविचारी सामान्यीकरण

   [Option ID = 2170]

3. Equivocation

   अनेकार्थक

   [Option ID = 2171]

4. Appeal to force

   बल आग्रह

   [Option ID = 2172]

24) Given below are two statements :

   Statement I : Aristotelian syllogism regards deduction and induction as inseparably related.

   Statement II : The Nyāya school of classical Indian philosophy regards deduction and induction as two aspects of the same process.

   In the light of the above statements, choose the *most appropriate answer* from the options given below :

   नीचे दो कथन दिए गए हैं :

   कथन I : अरस्तू का न्याय वाक्य निगमन और आगमन को अपृथक्करणीय रूप से संबंधित मानता है।

   कथन II : क्लासिकी भारतीय दर्शनशास्त्र का न्याय मत निगमन और आगमन को एक ही प्रक्रिया के दो पक्षों के रूप में मानता है।

   उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए :

[Question ID = 544][Question Description = 129_00_General_19_SEPT22_Q29]

1. Both Statement I and Statement II are true

   कथन I और II दोनों सही हैं

   [Option ID = 2173]

2. Both Statement I and Statement II are false

   कथन I और II दोनों गलत हैं

   [Option ID = 2174]

3. Statement I is true but Statement II is false

   कथन I सही है, लेकिन कथन II गलत है

   [Option ID = 2175]

4. Statement I is false but Statement II is true

   कथन I गलत है, लेकिन कथन II सही है

   [Option ID = 2176]

25) In Nyāya Syllogism all the three terms stand synthesized in which of the following steps of the inferential process?

न्याय वाक्य में अनुमानिक प्रक्रिया के निम्नलिखित में से कौनसे चरण में सभी तीनों पद संश्लिष्ट रहते हैं?

[Question ID = 545][Question Description = 130_00_General_19_SEPT22_Q30]

1. Example (Udaharana)

   उदाहरण

   [Option ID = 2177]

2. Conclusion (Nigamana)

   निष्कर्ष (निगमन)

   [Option ID = 2178]

3. Application (Upanaya)

   उपनय

   [Option ID = 2179]

4. Reason (hetu)

   हेतु

   [Option ID = 2180]

26) Which Indian Act makes it illegal to knowingly spread a computer virus?

निम्नलिखित में से कौन सा अधिनियम जानबूझ कर कंप्यूटर वाइरस फैलाने को अपराध करार देता है?

[Question ID = 546][Question Description = 131_00_General_19_SEPT22_Q31]

1. Data protection and Security Act, 1997

   डाटा रक्षण व सुरक्षा अधिनियम, 1997

[Option ID = 2181]

2. Information Security Act. 1998

सूचना सुरक्षा अधिनियम, 1998

[Option ID = 2182]

3. Information Technology Act. 2000

सूचना प्रौद्योगिकी अधिनियम, 2000

[Option ID = 2183]

4. Computer Misuse and Cyber Act. 2009

कंप्यूटर दुरुपयोग व साइबर अधिनियम, 2009

[Option ID = 2184]

27) Consider the following worksheet:

	A	B	C	D
1		5	10	50
2			15	50
3			20	50
4				

Which of the following formula should be entered into the cell D1 so that when it is copied into the cells D2 and D3. it gives the correct values as shown in the range D1:D3?

निम्नलिखित कार्य-पत्रक पर विचार कीजिए:

	A	B	C	D
1		5	10	50
2			15	50
3			20	50
4				

कोष्ठक D1 में निम्न में से कौन सा सूत्र प्रविष्ट किया जाए ताकि जब कोष्ठक D2 और D3 में इसकी कॉपी की जाए तो D1:D3 की रेंज में दर्शाए अनुसार सही मूल्य प्राप्त हो ?

[Question ID = 547][Question Description = 132_00_General_19_SEPT22_Q32]

1. B1 * C1

[Option ID = 2185]

2. B1 * C1

[Option ID = 2186]

3. B1 * C1

[Option ID = 2187]

4. B1 * C1

28) Which of the following three numbers (A-C) in decimal, octal and hexadecimal notations, respectively, is/are equivalent to $(11011001)_2$ in binary notation?

(A) $(217)_{10}$

(B) $(661)_8$

(C) $(D9)_{16}$

Choose the *correct answer* from the options given below :

दशमलव, अष्टाधारी और षोडश आधारी संकेतन में निम्न संख्याओं (A-C) में से कौन-कौन द्विचर संकेतन में $(11011001)_2$ के समान है?

(A) $(217)_{10}$

(B) $(661)_8$

(C) $(D9)_{16}$

दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

[Question ID = 548][Question Description = 133_00_General_19_SEPT22_Q33]

1. A Only

केवल A

2. B Only

केवल B

3. A and B Only

केवल A और B

4. A and C Only

केवल A और C

29) Given below are two statements :

Statement I   :   Cache memory is volatile memory and is much slower than Random Access Memory (RAM)

Statement II   :   CDs, DVDs and Magnetic Tapes are all optical media devices.

In the light of the above statements, choose the *correct answer* from the options given below :

नीचे दो कथन दिए गए हैं :

कथन I : द्युतिका स्मृति एक लोपशील स्मृति है और यादृच्छिक अभिगम स्मृति (आर ए एम) से कहीं धीमी है।

कथन II : सी डी, डी वी डी और चुंबकीय टेप सभी प्रकाशीय मीडिया युक्तियाँ हैं।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए :

[Question ID = 549][Question Description = 134_00_General_19_SEPT22_Q34]

1. Both Statement I and Statement II are true

   कथन I और II दोनों सत्य हैं

   [Option ID = 2193]

2. Both Statement I and Statement II are false

   कथन I और II दोनों असत्य हैं

   [Option ID = 2194]

3. Statement I is true but Statement II is false

   कथन I सत्य है, लेकिन कथन II असत्य है

   [Option ID = 2195]

4. Statement I is false but Statement II is true

   कथन I असत्य है, लेकिन कथन II सत्य है

   [Option ID = 2196]

30) Which of the following statements are correct regarding CERT-IN?

   (A) CERT-IN is the national nodal agency for responding to computer security incidents as and when they occur.

   (B) CERT-IN is operational since January 2014.

   (C) Forecast and alert of cyber security incidents is one of the functions of CERT-IN.

   Choose the *correct answer* from the options given below :

   सी ई आर टी–आई एन के संबंध में निम्नलिखित में से कौन से कथन सही हैं?

   (A) सी ई आर टी – आई एन कम्प्यूटर सुरक्षा संबंधी घटनाओं के होने पर प्रत्युत्तर हेतु राष्ट्रीय नोडल एजेंसी है।

   (B) सी ई आर टी – आई एन जनवरी, 2014 से प्रचालन में है।

   (C) साइबर सुरक्षा घटनाओं का पूर्वानुमान करना और संकट सूचना देना सी ई आर टी – आई एन के प्रकार्यों में से एक है।

   दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

[Question ID = 550][Question Description = 135_00_General_19_SEPT22_Q35]

1. A. B and C

A, B और C

[Option ID = 2197]

2. A and B Only

केवल A और B

[Option ID = 2198]

3. A and C Only

केवल A और C

[Option ID = 2199]

4. B and C Only

केवल B और C

[Option ID = 2200]

31) Geothermal field requires combination of following three conditions

(A)   A natural underground source of water
(B)   A mountain in the vicinity
(C)   An impermeable layer
(D)   A coal mine in the vicinity
(E)   A large mass of hot rock in the vicinity

Choose the *most appropriate answer* from the options given below :

भूतापीय क्षेत्र के लिए निम्नलिखित तीन अवस्थितियों के संयोजन की आवश्यकता होती है

(A)   एक प्राकृतिक भूगर्भीय जल स्रोत
(B)   सामीप्य में एक पर्वत
(C)   एक अभेद्य सतह
(D)   सामीप्य में एक कोयला खान
(E)   सामीप्य में बृहद्तम शिला

नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए:

[Question ID = 551][Question Description = 136_00_General_19_SEPT22_Q36]

1. A, C, E Only

केवल A, C और E

[Option ID = 2201]

2. A, C, D Only

केवल A, C और D

[Option ID = 2202]

3. B, C, D Only

केवल B, C और D

[Option ID = 2203]

4. B, D, E Only

केवल B, D और E

[Option ID = 2204]

32) Match List I with List II :

List I (Protocol/Summit)		List II (Theme)	
(A)	Paris Agreement	(I)	Emissions trading
(B)	Kyoto Protocol	(II)	Ozone depletion
(C)	Rio declaration	(III)	INDCs
(D)	Montreal Protocol	(IV)	Environment and development

Choose the correct answer from the options given below :

सूची-I के साथ का सूची-II मिलान कीजिए :

सूची-I (नयाचार/शिखर)		सूची-II (विषय)	
(A)	पेरिस समझौता	(I)	उत्सर्जन व्यापार
(B)	क्योटो नयाचार (प्रोटोकोल)	(II)	ओज़ोन अवक्षय
(C)	रियो उद्घोषणा	(III)	आई एन डी सी एस
(D)	मान्ट्रियल नयाचार (प्रोटोकोल)	(IV)	पर्यावरण व विकास

नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए :

[Question ID = 552][Question Description = 137_00_General_19_SEPT22_Q37]

1. (A)-(III). (B)-(I). (C)-(II). (D)-(IV)

   [Option ID = 2205]

2. (A)-(I). (B)-(II). (C)-(IV). (D)-(III)

   [Option ID = 2206]

3. (A)-(III). (B)-(I). (C)-(IV). (D)-(II)

   [Option ID = 2207]

4. (A)-(I). (B)-(II). (C)-(III). (D)-(IV)

   [Option ID = 2208]

33) Given below are two statements :

Statement I : Natural erosion of the soil is gradual removal of the top soil by natural processes.

Statement II : Accelerated erosion of the soil is caused due to man made activities. The rate of accelerated erosion is equal to the rate of soil formation.

In the light of the above statements, choose the *correct answer* from the options given below :

नीचे दो कथन दिए गए हैं :

कथन I :   मृदा का प्राकृतिक भू-क्षरण, प्राकृतिक प्रक्रियाओं द्वारा ऊपरी मृदा का क्रमिक अपनयन है।

कथन II :   मृदा का त्वरित भू-क्षरण मानवी क्रियाकलापों के कारण होता है। त्वरित भू-क्षरण की दर मृदा रचना दर के समान

होती है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए :

[Question ID = 553][Question Description = 138_00_General_19_SEPT22_Q38]

1. Both Statement I and Statement II are true

   कथन I और II दोनों सत्य हैं

   [Option ID = 2209]

2. Both Statement I and Statement II are false

   कथन I और II दोनों असत्य हैं

   [Option ID = 2210]

3. Statement I is true but Statement II is false

   कथन I सत्य है, लेकिन कथन II असत्य है

   [Option ID = 2211]

4. Statement I is false but Statement II is true

   कथन I असत्य है, लेकिन कथन II सत्य है

   [Option ID = 2212]

34) Chlorine in drinking water is used for

   (A)   Disinfection
   (B)   Removal of hardness
   (C)   Odor treatment
   (D)   turbidity control
   (E)   Removal of iron and manganese

   Choose the *correct answer* from the options given below :

पेय जल में क्लोरीन का प्रयोग निम्न में से किन के लिए किया जाता है ?

   (A)   विसंक्रमण
   (B)   कठोरता अपनयन
   (C)   गंध उपचार
   (D)   आविलता नियंत्रण
   (E)   लौह और मैंगनीज़ अपनयन

दिए गए विकल्पों में से सही उत्तर का चयन कीजिए:

[Question ID = 554][Question Description = 139_00_General_19_SEPT22_Q39]

1. A, C, E Only

    केवल A, C और E

    [Option ID = 2213]

2. A, B, C Only

    केवल A, B और C

    [Option ID = 2214]

3. A, D, E Only

    केवल A, D और E

    [Option ID = 2215]

4. C, D, E Only

    केवल C, D और E

    [Option ID = 2216]

35) Given below are two statements :

Statement I   :   Volatile Organic Chemicals (VOCs) are among the most commonly found

contaminants in ground water.

Statement II   :   The concentration of VOCs in ground water is much less compared to

that in surface waters.

In the light of the above statements, choose the *correct answer* from the options given below :

नीचे दो कथन दिए गए हैं :

कथन I :   वाष्पशील जैव रसायन (बीओसी), भूजल में पाए जाने वाले सर्वाधिक सामान्य संदूषकों में से हैं।

कथन II :   भूजल में बीओसी का सांद्रण भूपृष्ठ जलों की तुलना में काफी कम होता है।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सही उत्तर का चयन कीजिए :

[Question ID = 555][Question Description = 140_00_General_19_SEPT22_Q40]

1. Both Statement I and Statement II are true

    कथन I और II दोनों सत्य हैं

    [Option ID = 2217]

2. Both Statement I and Statement II are false

    कथन I और II दोनों असत्य हैं

    [Option ID = 2218]

3. Statement I is true but Statement II is false

कथन I सत्य है, लेकिन कथन II असत्य है

[Option ID = 2219]

4. Statement I is false but Statement II is true

कथन I असत्य है, लेकिन कथन II सत्य है

[Option ID = 2220]

36) Which Educational Institution was the first to start college classes for women?

निम्नलिखित में से किस शैक्षिक संस्था ने पहली बार महिलाओं के लिए कॉलेज की कक्षाएं प्रारम्भ की थी?

[Question ID = 556][Question Description = 141_00_General_19_SEPT22_Q41]

1. Central Hindu Girls School

केन्द्रीय हिन्दू गर्ल्स स्कूल

[Option ID = 2221]

2. Vasanta College

वसंता कॉलेज

[Option ID = 2222]

3. Miranda House

मिरांडा हाउस

[Option ID = 2223]

4. Bethune School for Girls

बेथ्यून स्कूल फॉर गर्ल्स

[Option ID = 2224]

37) Indira Gandhi National Open University was established in the year

इन्दिरा गांधी राष्ट्रीय मुक्त विश्वविद्यालय की स्थापना किस वर्ष हुई थी?

[Question ID = 557][Question Description = 142_00_General_19_SEPT22_Q42]

1. 1975

[Option ID = 2225]

2. 1980

[Option ID = 2226]

3. 1985

[Option ID = 2227]

4. 2000

[Option ID = 2228]

38) Which goal of the 2030 Agenda for Sustainable Development adopted by India in 2015 seeks to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all"?

भारत द्वारा सन् 2015 में स्वीकृत सतत विकास के लिए 2030 कार्यसूची का कौन सा लक्ष्य ''सभी के लिए समावेशी और समतामूलक गुणवत्तापूर्ण शिक्षा सुनिश्चित करना और जीवनपर्यन्त अधिगम के अवसरों को आगे बढ़ाना'' है?

[Question ID = 558][Question Description = 143_00_General_19_SEPT22_Q43]

1. Goal 2

    लक्ष्य 2

    [Option ID = 2229]

2. Goal 4

    लक्ष्य 4

    [Option ID = 2230]

3. Goal 6

    लक्ष्य 6

    [Option ID = 2231]

4. Goal 15

    लक्ष्य 15

    [Option ID = 2232]

39) Given below are two statements :

Statement I   :   The National Education Policy 2020 envisages that the extant 10+2 structure in School Education will be modified with a new pedagogical and curricular restructuring of 5+4+4+3 covering ages 3-18.

Statement II   :   The National Education policy 2020 envisages, that prior to the age of 5 every child will move to a "Preparatory class" or "Balvatika", which has an ECCE- qualified teacher.

In the light of the above statements, choose the *most appropriate answer* from the options given below :

नीचे दो कथन दिए गए हैं :

कथन I :   राष्ट्रीय शिक्षा नीति 2020 का विचार है कि विद्यालय शिक्षा में वर्तमान 10+2 ढांचे को नई शिक्षाशास्त्रीय और पाठ्यक्रम पुनर्संरचना के साथ संशोधित करके 3–18 आयुवर्ग के लिए 5+4+4+3 का ढांचा बनाया जाय।

कथन II :   राष्ट्रीय शिक्षा नीति 2020 का विचार है कि पाँच वर्ष से कम आयु का हर बच्चा एक ''तैयारी कक्षा'' या ''बाल वाटिका'' में जाय जहाँ एक इ.सी.सी.ई-अर्हता प्राप्त शिक्षक हो।

उपरोक्त कथन के आलोक में, नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए :

[Question ID = 559][Question Description = 144_00_General_19_SEPT22_Q44]

1. Both Statement I and Statement II are correct

    कथन I और II दोनों सही हैं

    [Option ID = 2233]

2. Both Statement I and Statement II are incorrect

कथन I और II दोनों गलत हैं

[Option ID = 2234]

3. Statement I is correct but Statement II is incorrect

कथन I सही है, लेकिन कथन II गलत है

[Option ID = 2235]

4. Statement I is incorrect but Statement II is correct

कथन I गलत है, लेकिन कथन II सही है

[Option ID = 2236]

40) The National Education Policy (2020) has recommended the replacement of the UGC by an umbrella organisation, the Higher Education Commission of India (HECI) with its four Verticals, namely-

(A)   National Higher Educational Regulatory Council

(B)   General Educational Council

(C)   Medical Council of India

(D)   National Accreditation Council.

(E)   Higher Education Grants Council.

Choose the *most appropriate answer* from the options given below :

राष्ट्रीय शिक्षा नीति (2020) ने यू.जी.सी. को एक छत्र-संगठन से प्रतिस्थापित करने की अनुशसा की है जिसका नाम भारतीय उच्च शिक्षा आयोग (एच.इ.सी.आइ) होगा। इसके चार उर्ध्वाधर अंग निम्न हैं:-

(A)   राष्ट्रीय उच्च शैक्षणिक नियामक परिषद

(B)   सामान्य शैक्षणिक परिषद

(C)   भारतीय चिकित्सा परिषद

(D)   राष्ट्रीय प्रत्यायन परिषद

(E)   उच्च शिक्षा अनुदान परिषद

नीचे दिए गए विकल्पों में से सबसे उपयुक्त उत्तर का चयन कीजिए :

[Question ID = 560][Question Description = 145_00_General_19_SEPT22_Q45]

1. A, B, C, D Only

केवल A, B, C, D

[Option ID = 2237]

2. B, C, D, E Only

केवल B, C, D, E

[Option ID = 2238]

3. A, C, D, E Only

केवल A, C, D, E

[Option ID = 2239]

4. A, B, D, E Only

केवल A, B, D, E

[Option ID = 2240]

Topic:- 11_GP_SH1_Set1_C

1) Read the following passage and answer questions from question:

Certain languages came to acquire a special status introduced by religious leaders, scholars, or conquerors. Sometimes they became the basis of power and privilege. A language spoken by a small minority, such as Latin in Medieval Europe could become the medium of scholarship, of record-keeping and of religious ceremony. A language introduced by conquerors, who became a ruling and landed elite, would be used in commerce, administration and law. During the era of imperialism, the languages of colonial powers became the languages of administration, codified laws, higher education, science and technology in their own colonies. This held back the develoopment of older languages excluded from these spheres. To a varying extent, languages such as English and French Still hold this position in some of the now independent nations of Asia and Africa. This can create problems within these states, as well as between neighbouring countries, notably in West Africa and the Caribbean. These have emerged from subjection to different alien powers. Words are symbols of human experience. Perceptions underlying them have undergone change over time and in response to new situations. Moreover, all languages are in a state of change sometimes gradual, sometimes rapid. They respond to new needs arising from developments in thought and knowledge, in productive techniques, in social relationships, in political and economic structures. Words, therefore, change their meanings and acquire fresh applications; specialised technical terms pass into general usage. And new words are invented. The process reminds us that language is not a corpus of learning, but an instrument adapted to human purposes.

निम्नलिखित गद्यांश को पढ़िए और प्रश्न संख्या 46–50 के उत्तर दीजिए–

धार्मिक नेताओं, विद्वानों या विजेताओं द्वारा परिस्थापन के कारण कतिपय भाषाओं को विशेष प्रस्थिति प्राप्त हुई। कभी–कभी वे सत्ता और विशेषाधिकार का आधार भी बन गईं। लैटिन जैसी एक छोटी अल्पसंख्या द्वारा बोली जाने वाली भाषा मध्यकालीन यूरोप में विद्वता की, अभिलेख–अनुरक्षण की और धार्मिक अनुष्ठानों की भाषा बन सकी। विजेताओं, जो एक शासकीय और भूस्वामी अभिजात वर्ग बने, द्वारा परिस्थापित किसी भाषा का ही प्रयोग वाणिज्य, प्रशासन और विधि सम्बन्धित कार्यों में होना था। साम्राज्यवाद के युग में औपनिवेशिक शक्तियों की भाषाएं ही उनके उपनिवेशों में भी प्रशासन, संहिताबद्ध कानून, उच्च शिक्षा, विज्ञान और तकनालजी की भाषाएं बनीं। इससे उन पुरानी भाषाओं का विकास अवरुद्ध हो गया जो इन क्षेत्रों से बहिष्कृत रह गईं। एशिया और अफ्रीका के कुछ देशों में, जो अब स्वतंत्र हैं अंग्रेजी और फ्रांसीसी जैसी भाषाएं, विविध आयतियों में अभी भी वही स्थिति बनाए हुए हैं। इससे इन राज्यों के अन्दर और पड़ोसी देशों के बीच में भी, समस्याएं उत्पन्न हो सकती हैं, विशेषतः पश्चिमी अफ्रीका और कैरेबियाइ क्षेत्रों में ये विभिन्न विदेशी शक्तियों की अधीनता से स्वतंत्र हुए हैं। शब्द मानव–अनुभवों के प्रतीक होते हैं। उनमें अन्तर्निहित बोध समय के साथ और नई स्थितियों से प्रतिक्रिया के कारण परिवर्तित हुए हैं। साथ ही सभी भाषाएं एक परिवर्तन की अवस्था में रहती हैं, कभी धीमी गति से तो कभी तीव्र गति से। वे विचार और ज्ञान के क्षेत्र में, उत्पादक तकनीकों में, सामाजिक सम्बन्धों में, राजनैतिक और आर्थिक संरचनाओं में होने वाले विकासों से उत्पन्न नई आवश्यकताओं के प्रत्युत्तर में विकसित होती हैं। इसलिए शब्द अपने अर्थ बदलते हैं और नए अनुप्रयोग अर्जित करते हैं। विशिष्टीकृत तकनीकी शब्दावलियां सामान्य उपयोग में आ जाती हैं। और, नए शब्द आविष्कृत होते हैं। यह प्रक्रिया हमें स्मरण दिलाती है कि भाषा अधिगम का संग्रह मात्र नहीं है बल्कि मानवीय प्रयोजनों के अनुकूल होने वाला एक उपकरण है।

Historically, minority languages were the basis of

ऐतिहासिक दृष्टिकोण से, अल्पसंख्यक भाषाएं निम्नलिखित का आधार थीं

[Question ID = 561][Question Description = 146_00_General_19_SEPT22_Q46]

1. Medieval culture

मध्ययुगीन संस्कृति

[Option ID = 2241]

2. Cultural independence

सांस्कृतिक स्वतंत्रता

[Option ID = 2242]

3. Scholarship

विद्वता

[Option ID = 2243]

4. Religious harmony

धार्मिक सौहार्द

[Option ID = 2244]

2) Read the following passage and answer questions from question:

Certain languages came to acquire a special status introduced by religious leaders, scholars, or conquerors. Sometimes they became the basis of power and privilege. A language spoken by a small minority, such as Latin in Medieval Europe could become the medium of scholorship, of record-keeping and of religious ceremony. A language introduced by conquerors, who became a ruling and landed elite, would be used in commerce, administration and law. During the era of imperialism, the languages of colonial powers became the languages of administration, codified laws, higher education, science and technology in their own colonies. This held back the develoopment of older languages excluded from these spheres. To a varying extent, languages such as English and French Still hold this position in some of the now independent nations of Asia and Africa. This can create problems within these states, as well as between neighbouring countries, notably in West Africa and the Caribbean. These have emerged from subjection to different alien powers. Words are symbols of human experience. Perceptions underlying them have undergone change over time and in response to new situations. Moreover, all languages are in a state of change sometimes gradual, sometimes rapid. They respond to new needs arising from developments in thought and knowledge, in productive techniques, in social relationships, in political and economic structures. Words, therefore, change their meanings and acquire fresh applications; specialised technical terms pass into general usage. And new words are invented. The process reminds us that language is not a corpus of learning, but an instrument adapted to human purposes.

निम्नलिखित गद्यांश को पढ़िए और प्रश्न संख्या 46-50 के उत्तर दीजिए-

धार्मिक नेताओं, विद्वानों या विजेताओं द्वारा परिस्थापन के कारण कतिपय भाषाओं को विशेष प्रस्थिति प्राप्त हुई। कभी-कभी वे सत्ता और विशेषाधिकार का आधार भी बन गईं। लैटिन जैसी एक छोटी अल्पसंख्या द्वारा बोली जाने वाली भाषा मध्यकालीन यूरोप में विद्वता की, अभिलेख-अनुरक्षण की और धार्मिक अनुष्ठानों की भाषा बन सकी। विजेताओं, जो एक शासकीय और भूस्वामी अभिजात वर्ग बने, द्वारा परिस्थापित किसी भाषा का ही प्रयोग वाणिज्य, प्रशासन और विधि सम्बन्धित कार्यों में होना था। साम्राज्यवाद के युग में औपनिवेशिक शक्तियों की भाषाएँ ही उनके उपनिवेशों में भी प्रशासन, संहिताबद्ध कानून, उच्च शिक्षा, विज्ञान और तकनालजी की भाषाएँ बनीं। इससे उन पुरानी भाषाओं का विकास अवरुद्ध हो गया जो इन क्षेत्रों से बहिष्कृत रह गईं। एशिया और अफ्रीका के कुछ देशों में, जो अब स्वतंत्र हैं अंग्रेजी और फ्रांसीसी जैसी भाषाएँ, विविध आयतियों में अभी भी वही स्थिति बनाए हुए हैं। इससे इन राज्यों के अन्दर और पड़ोसी देशों के बीच में भी, समस्याएँ उत्पन्न हो सकती हैं, विशेषतः पश्चिमी अफ्रीका और कैरेबियाइ क्षेत्रों में ये विभिन्न विदेशी शक्तियों की अधीनता से स्वतंत्र हुए हैं। शब्द मानव-अनुभवों के प्रतीक होते हैं। उनमें अन्तर्निहित बोध समय के साथ और नई स्थितियों से प्रतिक्रिया के कारण परिवर्तित हुए हैं। साथ ही सभी भाषाएँ एक परिवर्तन की अवस्था में रहती हैं, कभी धीमी गति से तो कभी तीव्र गति से। वे विचार और ज्ञान के क्षेत्र में, उत्पादक तकनीकों में, सामाजिक सम्बन्धों में, राजनैतिक और आर्थिक संरचनाओं में होने वाले विकासों से उत्पन्न नई आवश्यकताओं के प्रत्युत्तर में विकसित होती हैं। इसलिए शब्द अपने अर्थ बदलते हैं और नए अनुप्रयोग अर्जित करते हैं। विशिष्टीकृत तकनीकी शब्दावलियाँ सामान्य उपयोग में आ जाती हैं। और, नए शब्द आविष्कृत होते हैं। यह प्रक्रिया हमें स्मरण दिलाती है कि भाषा अधिगम का संग्रह मात्र नहीं है बल्कि मानवीय प्रयोजनों के अनुकूल होने वाला एक उपकरण है।

The language of the conquerors was used in

विजेताओं की भाषा का उपयोग निम्न में होता था-

[Question ID = 562][Question Description = 147_00_General_19_SEPT22_Q47]

1. Ruling over landed elite

   भूस्वामी अभिजातों पर शासन करने में

   [Option ID = 2245]

2. The administration of law

   कानून के प्रशासन में

   [Option ID = 2246]

3. Colonising the other countries

   दूसरे देशों को उपनिवेशित करने के लिये

   [Option ID = 2247]

4. Creating social inclusiveness

   सामाजिक समावेशीकरण करने के लिए

   [Option ID = 2248]

3) Read the following passage and answer questions from question.

Certain languages came to acquire a special status introduced by religious leaders, scholars, or conquerors. Sometimes they became the basis of power and privilege. A language spoken by a small minority, such as Latin in Medieval Europe could become the medium of scholarship, of record-keeping and of religious ceremony. A language introduced by conquerors, who became a ruling and landed elite, would be used in commerce, administration and law. During the era of imperialism, the languages of colonial powers became the languages of administration, codified laws, higher education, science and technology in their own colonies. This held back the develoopment of older languages excluded from these spheres. To a varying extent, languages such as English and French Still hold this position in some of the now independent nations of Asia and Africa. This can create problems within these states, as well as between neighbouring countries, notably in West Africa and the Caribbean. These have emerged from subjection to different alien powers. Words are symbols of human experience. Perceptions underlying them have undergone change over time and in response to new situations. Moreover, all languages are in a state of change sometimes gradual, sometimes rapid. They respond to new needs arising from developments in thought and knowledge, in productive techniques, in social relationships, in political and economic structures. Words, therefore, change their meanings and acquire fresh applications; specialised technical terms pass into general usage. And new words are invented. The process reminds us that language is not a corpus of learning, but an instrument adapted to human purposes.

निम्नलिखित गद्यांश को पढ़िए और प्रश्न संख्या 46-50 के उत्तर दीजिए-

धार्मिक नेताओं, विद्वानों या विजेताओं द्वारा परिस्थापन के कारण कतिपय भाषाओं को विशेष प्रस्थिति प्राप्त हुई। कभी-कभी वे सत्ता और विशेषाधिकार का आधार भी बन गईं। लैटिन जैसी एक छोटी अल्पसंख्या द्वारा बोली जाने वाली भाषा मध्यकालीन यूरोप में विद्वता की, अभिलेख-अनुरक्षण की और धार्मिक अनुष्ठानों की भाषा बन सकी। विजेताओं, जो एक शासकीय और भूस्वामी अभिजात वर्ग बने, द्वारा परिस्थापित किसी भाषा का ही प्रयोग वाणिज्य, प्रशासन और विधि सम्बन्धित कार्यों में होना था। साम्राज्यवाद के युग में औपनिवेशिक शक्तियों की भाषाएँ ही उनके उपनिवेशों में भी प्रशासन, संहिताबद्ध कानून, उच्च शिक्षा, विज्ञान और तकनालजी की भाषाएँ बनीं। इससे उन पुरानी भाषाओं का विकास अवरुद्ध हो गया जो इन क्षेत्रों से बहिष्कृत रह गईं। एशिया और अफ्रीका के कुछ देशों में, जो अब स्वतंत्र हैं अंग्रेजी और फ्रांसीसी जैसी भाषाएँ, विविध आयतियों में अभी भी वही स्थिति बनाए हुए हैं। इससे इन राज्यों के अन्दर और पड़ोसी देशों के बीच में भी, समस्याएँ उत्पन्न हो सकती हैं, विशेषतः पश्चिमी अफ्रीका और कैरेबियाइ क्षेत्रों में ये विभिन्न विदेशी शक्तियों की अधीनता से स्वतंत्र हुए हैं। शब्द मानव-अनुभवों के प्रतीक होते हैं। उनमें अन्तर्निहित बोध समय के साथ और नई स्थितियों से प्रतिक्रिया के कारण परिवर्तित हुए हैं। साथ ही सभी भाषाएँ एक परिवर्तन की अवस्था में रहती हैं, कभी धीमी गति से तो कभी तीव्र गति से। वे विचार और ज्ञान के क्षेत्र में, उत्पादक तकनीकों में, सामाजिक सम्बन्धों में, राजनैतिक और आर्थिक संरचनाओं में होने वाले विकासों से उत्पन्न नई आवश्यकताओं के प्रत्युत्तर में विकसित होती हैं। इसलिए शब्द अपने अर्थ बदलते हैं और नए अनुप्रयोग अर्जित करते हैं। विशिष्टीकृत तकनीकी शब्दावलियाँ सामान्य उपयोग में आ जाती हैं। और, नए शब्द आविष्कृत होते हैं। यह प्रक्रिया हमें स्मरण दिलाती है कि भाषा अधिगम का संग्रह मात्र नहीं है बल्कि मानवीय प्रयोजनों के अनुकूल होने वाला एक उपकरण है।

Imperialism was responsible for

साम्राज्यवाद निम्नलिखित के लिए उत्तरदायी था-

[Question ID = 563][Question Description = 148_00_General_19_SEPT22_Q48]

1. Codification of law

   कानून को संहिताबद्ध करने के लिए

   [Option ID = 2249]

2. Racial equity

   नस्लीय समता

[Option ID = 2250]

3. Primacy of local languages

स्थानीय भाषाओं का प्राधान्य

[Option ID = 2251]

4. Exclusion of old languages

पुरानी भाषाओं का बहिष्करण

[Option ID = 2252]

4) Read the following passage and answer questions from question:

Certain languages came to acquire a special status introduced by religious leaders, scholars, or conquerors. Sometimes they became the basis of power and privilege. A language spoken by a small minority, such as Latin in Medieval Europe could become the medium of scholarship, of record-keeping and of religious ceremony. A language introduced by conquerors, who became a ruling and landed elite, would be used in commerce, administration and law. During the era of imperialism, the languages of colonial powers became the languages of administration, codified laws, higher education, science and technology in their own colonies. This held back the developoment of older languages excluded from these spheres. To a varying extent, languages such as English and French Still hold this position in some of the now independent nations of Asia and Africa. This can create problems within these states, as well as between neighbouring countries, notably in West Africa and the Caribbean. These have emerged from subjection to different alien powers. Words are symbols of human experience. Perceptions underlying them have undergone change over time and in response to new situations. Moreover, all languages are in a state of change sometimes gradual, sometimes rapid. They respond to new needs arising from developments in thought and knowledge, in productive techniques, in social relationships, in political and economic structures. Words, therefore, change their meanings and acquire fresh applications; specialised technical terms pass into general usage. And new words are invented. The process reminds us that language is not a corpus of learning, but an instrument adapted to human purposes.

निम्नलिखित गद्यांश को पढ़िए और प्रश्न संख्या 46–50 के उत्तर दीजिए–

धार्मिक नेताओं, विद्वानों या विजेताओं द्वारा परिस्थापन के कारण कतिपय भाषाओं को विशेष प्रस्थिति प्राप्त हुई। कभी-कभी वे सत्ता और विशेषाधिकार का आधार भी बन गईं। लैटिन जैसी एक छोटी अल्पसंख्या द्वारा बोली जाने वाली भाषा मध्यकालीन यूरोप में विद्वता की, अभिलेख-अनुरक्षण की और धार्मिक अनुष्ठानों की भाषा बन सकी। विजेताओं, जो एक शासकीय और भूस्वामी अभिजात वर्ग बने, द्वारा परिस्थापित किसी भाषा का ही प्रयोग वाणिज्य, प्रशासन और विधि सम्बन्धित कार्यों में होना था। साम्राज्यवाद के युग में औपनिवेशिक शक्तियों की भाषाएँ ही उनके उपनिवेशों में भी प्रशासन, संहिताबद्ध कानून, उच्च शिक्षा, विज्ञान और तकनालजी की भाषाएँ बनीं। इससे उन पुरानी भाषाओं का विकास अवरुद्ध हो गया जो इन क्षेत्रों से बहिष्कृत रह गईं। एशिया और अफ्रीका के कुछ देशों में, जो अब स्वतंत्र हैं अंग्रेजी और फ्रांसीसी जैसी भाषाएँ, विविध आयतियों में अभी भी वही स्थिति बनाए हुए हैं। इससे इन राज्यों के अन्दर और पड़ोसी देशों के बीच में भी, समस्याएँ उत्पन्न हो सकती हैं, विशेषतः पश्चिमी अफ्रीका और कैरेबियाय क्षेत्रों में ये विभिन्न विदेशी शक्तियों की अधीनता से स्वतंत्र हुए हैं। शब्द मानव-अनुभवों के प्रतीक होते हैं। उनमें अन्तर्निहित बोध समय के साथ और नई स्थितियों से प्रतिक्रिया के कारण परिवर्तित हुए हैं। साथ ही सभी भाषाएँ एक परिवर्तन की अवस्था में रहती हैं, कभी धीमी गति से तो कभी तीव्र गति से। वे विचार और ज्ञान के क्षेत्र में, उत्पादक तकनीकों में, सामाजिक सम्बन्धों में, राजनैतिक और आर्थिक संरचनाओं में होने वाले विकासों से उत्पन्न नई आवश्यकताओं के प्रत्युत्तर में विकसित होती हैं। इसलिए शब्द अपने अर्थ बदलते हैं और नए अनुप्रयोग अर्जित करते हैं। विशिष्टीकृत तकनीकी शब्दावलियाँ सामान्य उपयोग में आ जाती हैं। और, नए शब्द आविष्कृत होते हैं। यह प्रक्रिया हमें स्मरण दिलाती है कि भाषा अधिगम का संग्रह मात्र नहीं है बल्कि मानवीय प्रयोजनों के अनुकूल होने वाला एक उपकरण है।

One of the characteristics of languages is

भाषाओं की एक लाक्षणिकता है–

[Question ID = 564][Question Description = 149_00_General_19_SEPT22_Q49]

1. Constant change in meanings of words

   शब्दों के अर्थों में निरंतर परिवर्तन

   [Option ID = 2253]

2. Subjection to different alien powers.

   विभिन्न विदेशी शक्तियों की अधीनता

   [Option ID = 2254]

3. The ability to survive against heavy odds.

   विपरीत परिस्थितियों के समक्ष भी उत्तरजीवी रह सकने की क्षमता

   [Option ID = 2255]

4. Their monopoly by the elites.

   अभिजातों द्वारा उन पर एकाधिकार

   [Option ID = 2256]

5) Read the following passage and answer questions from question:

Certain languages came to acquire a special status introduced by religious leaders, scholars, or conquerors. Sometimes they became the basis of power and privilege. A language spoken by a small minority, such as Latin in Medieval Europe could become the medium of scholorship, of record-keeping and of religious ceremony. A language introduced by conquerors, who became a ruling and landed elite, would be used in commerce, administration and law. During the era of imperialism, the languages of colonial powers became the languages of administration, codified laws, higher education, science and technology in their own colonies. This held back the develoopment of older languages excluded from these spheres. To a varying extent, languages such as English and French Still hold this position in some of the now independent nations of Asia and Africa. This can create problems within these states, as well as between neighbouring countries, notably in West Africa and the Caribbean. These have emerged from subjection to different alien powers. Words are symbols of human experience. Perceptions underlying them have undergone change over time and in response to new situations. Moreover, all languages are in a state of change sometimes gradual, sometimes rapid. They respond to new needs arising from developments in thought and knowledge, in productive techniques, in social relationships, in political and economic structures. Words, therefore, change their meanings and acquire fresh applications; specialised technical terms pass into general usage. And new words are invented. The process reminds us that language is not a corpus of learning, but an instrument adapted to human purposes.

निम्नलिखित गद्यांश को पढ़िए और प्रश्न संख्या 46-50 के उत्तर दीजिए-

धार्मिक नेताओं, विद्वानों या विजेताओं द्वारा परिस्थापन के कारण कतिपय भाषाओं को विशेष प्रस्थिति प्राप्त हुई। कभी-कभी वे सत्ता और विशेषाधिकार का आधार भी बन गईं। लैटिन जैसी एक छोटी अल्पसंख्या द्वारा बोली जाने वाली भाषा मध्यकालीन यूरोप में विद्वता की, अभिलेख-अनुरक्षण की और धार्मिक अनुष्ठानों की भाषा बन सकी। विजेताओं, जो एक शासकीय और भूस्वामी अभिजात वर्ग बने, द्वारा परिस्थापित किसी भाषा का ही प्रयोग वाणिज्य, प्रशासन और विधि सम्बन्धित कार्यों में होना था। साम्राज्यवाद के युग में औपनिवेशिक शक्तियों की भाषाएँ ही उनके उपनिवेशों में भी प्रशासन, संहिताबद्ध कानून, उच्च शिक्षा, विज्ञान और तकनालजी की भाषाएँ बनीं। इससे उन पुरानी भाषाओं का विकास अवरुद्ध हो गया जो इन क्षेत्रों से बहिष्कृत रह गईं। एशिया और अफ्रीका के कुछ देशों में, जो अब स्वतंत्र हैं अंग्रेजी और फ्रांसीसी जैसी भाषाएँ, विविध आयतियों में अभी भी वही स्थिति बनाए हुए हैं। इससे इन राज्यों के अन्दर और पड़ोसी देशों के बीच में भी, समस्याएँ उत्पन्न हो सकती हैं, विशेषतः पश्चिमी अफ्रीका और कैरेबियाइ क्षेत्रों में ये विभिन्न विदेशी शक्तियों की अधीनता से स्वतंत्र हुए हैं। शब्द मानव-अनुभवों के प्रतीक होते हैं। उनमें अन्तर्निहित बोध समय के साथ और नई स्थितियों से प्रतिक्रिया के कारण परिवर्तित हुए हैं। साथ ही सभी भाषाएँ एक परिवर्तन की अवस्था में रहती हैं, कभी धीमी गति से तो कभी तीव्र गति से। वे विचार और ज्ञान के क्षेत्र में, उत्पादक तकनीकों में, सामाजिक सम्बन्धों में, राजनैतिक और आर्थिक संरचनाओं में होने वाले विकासों से उत्पन्न नई आवश्यकताओं के प्रत्युत्तर में विकसित होती हैं। इसलिए शब्द अपने अर्थ बदलते हैं और नए अनुप्रयोग अर्जित करते हैं। विशिष्टीकृत तकनीकी शब्दावलियाँ सामान्य उपयोग में आ जाती हैं। और, नए शब्द आविष्कृत होते हैं। यह प्रक्रिया हमें स्मरण दिलाती है कि भाषा अधिगम का संग्रह मात्र नहीं है बल्कि मानवीय प्रयोजनों के अनुकूल होने वाला एक उपकरण है।

The passage analyses languages as a

यह गद्यांश भाषा का विश्लेषण किस रूप में करता है?

[Question ID = 565][Question Description = 150_00_General_19_SEPT22_Q50]

1. Corpus of learning

   अधिगम का संग्रह

   [Option ID = 2257]

2. Symbol of State power

   राज्य-सत्ता का प्रतीक

   [Option ID = 2258]

3. Tool to meet human purposes

   मानवीय प्रयोजनों को पूरा करने का उपकरण

   [Option ID = 2259]

4. Formal link between old and new generations.

   पुरानी और नई पीढ़ी के बीच की औपचारिक कड़ी

   [Option ID = 2260]